DOCUMENT RESUME

ED 421 175 JC 980 319

AUTHOR Richards, Beverly
TITLE A Research Study To Determine a Profile for Student Success in Completing Self-Paced Study.
PUB DATE 1998-05-00
NOTE 106p.; Master's Research Project, University of Phoenix.
PUB TYPE Dissertations/Theses (040)
EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Basic Skills; Community Colleges; Comparative Analysis; Dropout Rate; Educational Research; High Risk Students; *Independent Study; Nontraditional Education; Part Time Students; Profiles; *School Holding Power; Student Attitudes; *Student Characteristics; Student Surveys; *Two Year College Students; Two Year Colleges
IDENTIFIERS Santa Fe Community College NM

ABSTRACT

This research study was conducted to determine if certain characteristics were consistently present in students who completed self-paced study courses, as opposed to those who did not. The survey was conducted at the Santa Fe Community College Flex Lab (New Mexico), which was designed to provide students with an alternative, self-paced method of taking college credit courses, allowing them to complete assignments at home, work, or in an open classroom. A survey was administered during orientation meetings for 148 students enrolled during fall 1997. It asked ten factual questions and four opinions of students on topics that included demographic information, educational, personal, financial, and employment background, and basic skills. Results provided a general profile of all students in the sample population and comparisons of characteristics between those who finished the Flex Lab course and those who didn't. Results indicated that the Flex Lab provided a supportive environment with relatively high completion rates, and that students with any one of seven characteristics (computer knowledge, part-time status, caring for children, scholarship funding, typing skills, or being male) had higher completion rates. (Contains 27 references.) (YKH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 421 175

A RESEARCH STUDY TO DETERMINE A PROFILE FOR STUDENT SUCCESS IN COMPLETING SELF-PACED STUDY

by

Beverly Richards

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☒ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
Beverly Richards
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
1

A research project report
submitted to the faculty of
the University of Phoenix
in partial fulfillment
of the requirements for the degree of
Master of Arts in Education
May, 1998

TC 980 314

ABSTRACT

Title: A RESEARCH STUDY TO DETERMINE A PROFILE FOR STUDENT SUCCESS IN COMPLETING SELF-PACED STUDY

Author: Beverly I. Richards

Date: May, 1998

This research project was conducted to determine if certain characteristics were consistently present in students who completed self-paced study courses as opposed to those who did not. This study was performed based on the body of literature showing that drop out rates are high (35 to 50 percent) for community colleges and populations in general such as those found in Santa Fe, New Mexico.

The survey was conducted in Santa Fe Community College's Flex Lab, in Santa Fe, New Mexico. The Flex Lab was designed to provide students with an alternative method of taking college credit courses. Its structure allows students to enroll for a course during a 12-week period. They are able to do the course assignments at home, at work, or in an open classroom. Support and assistance is available to these students during the class term.

A survey of fourteen questions was devised and administered during orientation meetings for 148 students enrolled during the Fall Term of 1997. The survey asked for ten factual pieces of information and four opinions from the students on topics which included self-paced experience, computer background, personal preferences, employment information, family responsibilities, financial sources, typing speed, degree requirements, full- or part-time status, educational background, age, and gender. A fifteenth question (Did the student finish the class?) was added and answered by the Flex Lab staff at the end of the term.

The results were analyzed and provided a general profile (without differentiating between those who finished the course and those who did not) of all the students in the sample population, and additionally provided a comparison within each characteristic between those who finished and those who did not. The results showed that students with any one of seven different characteristics (basic computer knowledge, part-time status, caring for children as part of their family responsibility, scholarship funding, some typing skill, or being male) tended to show a greater completion rate. The research also found that the Flex Lab provides a supportive environment and in this study maintained a 69 percent completion rate, which is considered higher than average in like institutions.

TABLE OF CONTENTS

Chapter

1. Introduction 1
   Problem Statement 1
   Research Purpose 2
   Background 3
   Research Questions 4
   Operational Definitions 4
   Technical and Other Terms 5
   Dependent and Independent Variables 5
   Hypotheses 6
   Scope 8
   General Procedures 9
   Summary 10
2. Literature Review 11
   Introduction 11
   Theoretical Framework 11
   Santa Fe Community College 12
   National Studies 13
   Self-Paced Study 17
   What Can Be Done? 18
   Summary 21
3. Methodology 22
   Introduction 22
   Research Design 22
      Research Strategy 22

TABLE OF CONTENTS
(continued)

Research Design (continued)

Population Sample....23

Measurement of Variables....23

Research Instrument....25

Sampling Methods and Procedures....25

Analytical Methods....27

Summary....27

4. Results and Findings....29

Introduction....29

Results....29

Findings....31

Summary....35

5. Conclusions and Recommendations....37

Introduction....37

Conclusions of Data Analysis and Literataure Review....37

Effects of Limitations....45

Recommendations to Management....46

Implications....46

Appendixes

A. Survey Instrument....48

B. Survey Results in Spreadsheet Form....49

C. Survey Results:
Frequency Distributions and Graphic Display....56

D. Survey Results:
Cross Tabulations and Chi-Square Tests....72

INTRODUCTION

Problem Statement.

Although it would seem that almost all college students should be able to complete course work when given more than enough time, a schedule of their own, and as much assistance as they desire, the withdrawal rate for students in Santa Fe Community College's self-paced Flex Lab seemed high, with thirty-five to forty-five percent of the students failing to complete their classes. *The essential problem of this research is based on the desire of the Flex Lab administration to define pre-enrollment characteristics that can be used to predict which students are likely to complete self-paced courses and which are not.* Determining this information will enable the staff to provide further assistance or appropriate options for students that are unlikely to complete self-paced courses.

In order to provide opportunities outside of traditional college settings, Santa Fe Community College developed the Flex Lab in 1994 as the brain child of Dr. John Pacheco and Dr. Sheila Ortego. The Flex Lab was designed to provide standard college curriculum for credit courses in a self-paced format. Students could complete their studies at home, on campus, or at work. In the last four years, hundreds of students successfully completed their courses through the Flex Lab. More and more classes are being offered through this program and it is considered a successful component of the External Programs Division. In the researcher's opinion as the original developer of the self-paced study program for the Flex Lab, a Flex Lab instructor, and the overall coordinator for the Flex Lab for the first several years of its existence, it seemed

that self-paced study was not for everyone. Oftentimes, students lacked the self-discipline or even just the self-confidence that they needed to finish the course work without being given assignments in a traditional format. However, to date an effective screening instrument for prospective students has not been developed.

Students are often hesitant about classes with no structure, feeling they do not have the ability to organize their time and prioritize their tasks to complete the work. To assist students in this environment, the Flex Lab staff provided extensive support, assistance, and tracking during the time a student was enrolled in self-paced study classes, and yet a large number of students still withdrew each semester. Each student took part in an orientation meeting, received self-study material, was contacted by the staff if they did not meet their own personally-determined deadlines, and had instructors or teacher aids available by phone, computer, or in person 52 hours per week. Since the opening of the Flex Lab, end-of-class surveys have been required and tallied, providing a large amount of data. However, students who dropped out never completed these surveys.

Research Purpose.

For the first time, students were surveyed during the orientation meetings prior to beginning the class. From the various survey questions, it was anticipated that a profile would emerge showing tendencies among students with like answers to either complete or withdraw from self-paced study courses. This profile would allow staff and faculty of the Flex Lab to provide appropriate assistance and guidance to incoming students. The primary purpose of this research project is to examine the relationship between students' answers at

the beginning of a Flex Lab class and those students' ability to complete that course.

Background.

Santa Fe Community College is not alone in finding large numbers of its students dropping out of classes and programs all together. The national averages for college freshman dropouts have reached an alarming rate of twenty-five to thirty percent (Cornell, 1996; Israelsen, 1996), and nearby Texas finds that only about half of the students enrolled in Texas universities receive a degree (Hobby, 1997).

Many researchers have tried to determine what characteristics are found in those who finish school and those who don't. Some studies show that full-time versus part-time attendance is the key to completion. Others show that age, gender, racial grouping, family concerns, and financial troubles had a significant bearing on persistence and completion rates (Brawer, 1996; Cornell, 1996). Because of a record number of students returning to college after dropping out, some students are being termed "stop outs" instead of "dropouts." Many of these students are nontraditional and have varied reasons for attending school in an on and off manner (Survey, 1996).

Fred Keller developed a form of study referred to as the Personalized System of Instruction (PSI) and his research showed that students demonstrate superior learning and greater success in a self-paced environment. The Flex Lab's system of learning was based on this type of curriculum (Richards, 1994) and, indeed, the students who do complete courses in the Flex Lab often comment on their success where traditional classroom presentation has failed for them. In a somewhat similar study to this research project, a group of self-

paced computer students at the College of Business at the University of Notre Dame was evaluated using the Myers Briggs Type Indicator (a personality classification test). That experiment showed that certain personality types consistently demonstrated a ten to fifteen percent higher completion rate than other types (Kern, 1987).

There have been no published reports located so far that actually evaluate self-paced students based on specific personal data as this research project did. This may be due to the limited number of self-paced programs offered for credit within the college structure. Self-paced study is often found in non-credit classes and completion rates are not as closely monitored. Having worked within the Flex Lab from its beginning, the researcher may be able to lend additional interpretive information to the statistical data that is produced by the survey.

Research Questions.

The purpose of this study was to draw a correlation between questions that students answered prior to beginning the class and how many of these same students completed the course in the allotted time. The survey contained a set of fifteen questions, four of which required the student to voice an opinion, and ten others which simply asked them to state a fact. The questions were selected from those suggested by instructors and staff involved in the Flex Lab.

Operational Definitions.

In this study, each of the 148 students was presented with a fourteen-question survey during the orientation session for their self-paced course in the

Flex Lab (see Appendix A). All questions were answered in a multiple-choice format, the majority of which were "Yes or No" questions. An additional question asking whether or not the student finished the course was added to the survey and answered by the Flex Lab Staff at the end of the 12-week time. Each student was identified by the last four digits of his or her Social Security Number. Each multiple-choice answer was assigned a number (1, 2, or 3) for statistical analysis purposes. These numbers were then tested to see what relationship existed between the answers to the first fourteen questions and completion of the course.

Technical and Other Terms.

It is not anticipated that there will be any technical terms in the body of this paper. Any terms that may be unknown to a reader without a technical background will be defined in context of their use.

Dependent and Independent Variables.

In a study such as this, the statistical model represents the relationship between things that change (dependent variables) and those things that produce that change (independent variables) (Kenny, 1987). In this project the independent variables are represented by the topic of each question and are listed below:

1) Being the first self-paced study course a student has taken

2) Having a basic knowledge of computers prior to starting the course

3) Believing that they will finish the course within the time allotted

4) Having ever been self-employed

5) Being currently unemployed

6) Being currently employed part time

7) Being currently employed full time

8) Caring for children regularly as part of family responsibility

9) Paying for the course personally

10) Having family pay for the course

11) Having outside funding for the course

12) Having no typing ability

13) Having a typing speed of 30 words per minute or less

14) Having a typing speed of 40 words per minute or less

15) Needing the course as a part of a degree program

16) Preferring to take the class in a traditional format

17) Being enrolled in a total of 1-5 credits

18) Being enrolled in a total of 6-11 credits

19) Being enrolled in a total of 12 or more credits

20) Graduating from high school within the last year

21) Being over 40 years old

22) Being female

The dependent variable is whether or not the student completed the course.

Hypotheses.

At the beginning of this research project, it was supposed by the researcher and other Flex Lab staff that certain results would be produced by the survey. These results are as follows:

- Students who had enrolled in self-paced courses before had a greater completion rate than those who enrolled for the first time.
- Students with a basic knowledge of computers prior to starting a self-paced study course had a greater completion rate than those who did not.
- Students who believed they would be able to complete a self-paced study course on time had a greater completion rate than those who did not.
- Students who had been self-employed showed a greater completion rate than those who had not.
- Students who were employed part time or less had a greater completion rate than those who were employed full time during their self-paced study course.
- Students who did not have children they regularly cared for during their self-paced study class showed a greater completion rate than those who did.
- Students who paid for their own self-paced study course had a greater completion rate than those who did not.
- Students who had a typing speed of 30 words per minute or greater showed a greater completion rate than those who did not.
- Students who were enrolled in a self-paced study class that was a requirement for a current degree program showed a greater completion rate than those enrolled in a class that was not required.
- Students who preferred to take a self-paced study class, even

though a traditional alternative existed, showed a greater completion rate than those who preferred to take the class in a traditional classroom.

- Students who were enrolled in six or less additional credits while taking their self-paced study course showed a greater completion rate than those students concurrently enrolled in more credits.
- Students who had graduated from high school more than one year prior to enrolling in the self-paced study course showed a greater completion rate than students who had graduated within the last year.
- Students over 40 showed a greater completion rate than students under 40.
- Female students showed a greater completion rate than male students.

Scope.

The research for this project was conducted from September, 1997, through December, 1997. The sample consisted of 148 students enrolling in Flex Lab classes at Santa Fe Community College during September who were supposed to complete their classes by the end of the year. The survey was given to all enrolling students during their orientation meeting.

The students were from the general student populous of the Santa Fe area. The Santa Fe Community College Institutional Overview defines the service area as including the Santa Fe public school district, seven outlying villages and eight Indian pueblos. "According to 1990 census data, the ethnic

composition of the county service area is predominantly Hispanic, with 49.5 percent identifying Hispanic origins and another five percent identifying Native American origins.... The breakdown by sex of Santa Fe County's population is similar to the rest of the state and the nation, with 49 percent male and 51 percent female" (SFCC, 1994).

The Flex Lab agreed to and was involved in this research project as they were very anxious to find ways to increase student success. The Flex Lab Coordinator, Marilyn Bloom, granted permission for this study to be done. The survey was expected to take less than 10 minutes during the orientation period and did not impact the students significantly in any way.

Findings from this survey only reflect information gathered on the sample described above. Although a longer study might produce more patterns, it was anticipated that there would be useful trends displayed from this research project. It is probable that Santa Fe Community College may decide to continue the orientation survey for a longer period to generate their own statistics.

General Procedures.

A group consisting of all students enrolled in the Flex Lab starting classes in September, 1997, was used as the study group. There was no screening of students prior to administering the survey. They answered the survey questions without any factual backup being used, in other words, their answers were considered accurate without checking additional sources and may be skewed by questions they did not answer honestly. The survey answers were compared to the end result of each student completing his or her class and the emerging profile of this group of students with the overall completion rates.

Summary.

The overall intention of collecting this survey data was to see if a trend or pattern emerges from these 148 students that demonstrates significantly related characteristics between beginning students and their ability to complete these self-paced classes. The results were representative of this particular group of students and when interpreted within the collection of existing research and literature on the subject may reveal helpful information for Flex Lab administration at Santa Fe Community College and other institutions developing self-paced study programs.

CHAPTER TWO
LITERATURE REVIEW

Introduction

This research study was conducted to determine what relationship, if any, exists between fourteen characteristics of beginning students and their ability to complete a self-paced study class. In order to best interpret the results, it was essential to review the existing literature and other research that form a background of pertinent information. There is much written on the topic of academic dropouts and student success rates. The information here focuses on college-level education and specific factors that are believed to contribute to the retention or attrition of students enrolled in these programs. Very little written material has been found on the success of self-paced study programs in colleges. Unfortunately, community colleges often do not have the funding or support for ongoing, comprehensive research and there is "no consistently funded national agency charged with studying the institutions as unique entities" (Cohen, 1996).

Theoretical Framework.

If God considers the Garden of Eden the first classroom, it would appear that Adam and Eve failed their lessons and qualify as the first dropouts. Academic institutions have long since been plagued with the problem of failures, dropouts, and the newly defined off-and-on "stop outs" (Survey, 1996). Numerous studies have been done to define the reasons for students failing to

complete their classes and academic programs, and many reasons, primarily "socioeconomic status, location, school behavior, and academic achievement" have been found to attribute to dropping out (Gaustad, 1991). It is interesting to note that studies reach varied conclusions, and although there is a huge body of research on the topic, there is no definitive conclusion that can be relied on for determining which students will finish and which will not. The research does present some interesting background and when compared with the basic data from Santa Fe Community College, it draws a fairly complete picture of what one could expect.

Santa Fe Community College.

Santa Fe Community College is located in New Mexico's capital city of Santa Fe. It serves a community of approximately 100,000 people, predominantly Hispanic, with a relatively large population of Native Americans (five percent) drawn from 21 different American Indian tribes. Recent Caucasian immigration has added to the cultural mix. In a 1993 American College Testing Services (ACT) survey, statistics provide a profile of the student base at SFCC.

> "Hispanics and Native Americans comprise 41 percent of SFCC's student body; 64 percent are female; and the majority are in their 30s, living within the district and registered on a non-degree basis. Most students work 30 or more hours a week, enroll part-time (89 percent), and do not receive financial assistance. " (SFCC, 1996).

For those that do complete courses and go on, the track record is very good.

> "Transfer studies show that 99 percent of Santa Fe Community College students who apply to four-year institutions are admitted, and 88 percent of admitted applicants enroll. Eighty-six percent of all SFCC transfer students maintain a 2.0 grade point average or

better at the university level (SFCC, 1996).

In April, 1995, the Santa Fe Office of Community Development released statistics showing Santa Fe with a median income level 28 percent below the national median with a cost of living that is 12 percent above the national average. These statistics also showed that 75 percent of the workers in Santa Fe could not afford the price of a home and that 40 percent could not afford the median rental cost. In other words, people in Santa Fe are often functioning on a low socioeconomic level . In addition, to the financial considerations, many of the people in the surrounding areas live in small rural villages and are hesitant to come in to Santa Fe to participate in long-term classes and often find it difficult to complete a semester (SFCC, 1996).

To further diminish the possibility of success, the student body pulls from a population in which "only 17 percent of New Mexicans have any education past high school, and Santa Fe Public Schools has one of the highest dropout rates in the nation....The local dropout rate exceeds 33 percent." (SFCC, 1996). To combat these factors, SFCC's Adult Basic Education programs works with over 2,500 students a year and has an extensive array of classes and services to help students meet their goals (Promising Practices, 1997).

National Studies.

A study done in Florida in 1990, showed that "Students most likely to not return to either the college or higher education are older when they start, working full-time, attending college part-time and take college prep classes. The above description has become the profile of the majority student at most public community colleges" (Windham, 1994). A number of studies done in the

1970s and 1980s show the same results: two-year colleges have higher dropout rates than four-year colleges (Mohammadi, 1994; Price, 1993).

Other national studies show that students are more likely to drop out if they are Hispanic (Gaustad, 1991; Chahin, 1993; Schwartz, 1995; and Smolkin, 1998), or Native American ("American Indians drop out before graduation more frequently than any other ethnic group") (Gordon, 1997). Additionally, students in the South or West are more likely to drop out than in the Northeast (Gaustad, 1991). These, in and of themselves, put Santa Fe Community College students at risk.

Additionally, various studies have shown that there are many more contributing factors to dropping out, some quite justifiable, and most "simply unexplained" (Gaustad, 1991). In Utah, which has a dropout rate above 40 percent, many of the students leave school due to marriage, missionary work, or because they are out of financial resources (Israelsen, 1996). Utah isn't the only place students find they are running out of money. Kelley Hayden, a spokesman for ACT in Iowa City, Iowa, says "A lot of them just are not prepared for college, and they're getting into a lot of debt" (Cornell, 1996). Even in Texas, the number of dropouts have reached a record high, with less than half of students who enroll in a University eventually graduating (Hobby, 1997). With even grimmer statistics, Tinto reported in 1987 that "the true overall national attrition rate was 34 percent for 4-year colleges and 54 percent for 2-year colleges. He went on to state that based on a review of the literature these rates have not changed appreciably in this century" (Glass, 1995).

Even though education is expensive, the job market continues to demand educated prospects and in the long run is willing to pay for it. Bill Hobby included an interesting projection in his "Outlook" column in the Houston Chronicle (1996).

LIFETIME HOUSEHOLD INCOME (1996 dollars)
IN TEXAS BY EDUCATION LEVEL

High School Diploma - $1.5 Million
Bachelor's Degree - $2.6 Million
Graduate Degree - $3.3 Million

The "cost" of dropping out continues to increase as more and more jobs require an education, if only for certain skills, and opportunities continue to increase for skilled workers and decline for unskilled workers. Not only do the wages vary considerably between dropouts and graduates, but the "earnings level for dropouts doubled while it nearly tripled for college graduates, a trend that is likely to intensify in the future" (Schwartz, 1995).

In addition to having difficulty paying for college costs, many students find that their age is a deterrent. No longer living at home with their parents, but instead having family and work responsibilities of their own, older students find that the added burden of going back to school can be overwhelming. Additionally, study habits and other academic skills may have "gotten rusty" and they find it harder and more time consuming to study and prepare for classes. Oddly enough, while young people are often encouraged to seek a degree, older students repetitively found that there was a lack of support and outright skepticism from family and other close acquaintances when they attempt to go back to school. These added pressures can move a student towards dropping out, rather than completing a class (Strickland, 1997).

Other studies reached other conclusions. In a 1990 study of Florida's Niagara County Community College, research found that the strongest indicator for dropping out was a low high school GPA. Additionally, "students in the age range 20-24, minorities other than Asian, and part-time students each demonstrated higher dropout rates" (Feldman, 1993).

In the 1983 report of the National Commission or Excellence in Education (NCEE), provided a report to the American People entitled "A Nation at Risk." Their conclusions were distressing at best:

> We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people. What was unimaginable a generation ago has begun to occur -- others are matching and surpassing our educational attainments.

The NCEE's report brings to the forefront the issue of academic success from the standpoint of a national concern. Likewise, academic institutions have to face the issue of dropouts not only from a student's personal level, but from the business end of higher education. Colleges and universities have expended a great deal of time, money, and marketing energy to recruit minorities, students from lower socioeconomic backgrounds, and reentry students. It does not set well to have large numbers of those same students dropping out nor to have the attrition rate at an all-time high (Price, 1993). With the lower number of high school graduates and the "accompanying funding loss in higher education" colleges are facing an urgent need to improve student retention (Glass, 1995).

Whether we like it or not, once we accept mediocrity in our communities, we can expect that approximately one-third of college students will drop out. The question addressed in this research study is not how to keep 100 percent of the students enrolled, but how to best identify the dropouts ahead of time and either provide alternative forms of education, assist in eliminating the problems, or redirect their resources to better uses.

Self-paced Study.

When faced with the difficult task of providing sound educational alternatives for a growing numbers of non-traditional students in addition to the more traditional population, Santa Fe Community College developed the Flex Lab as an option for students who found that the constraints of scheduled classes limited their ability to succeed. Based on Fred Keller's principal that "all students can master the same material when given adequate study time and assistance" (Richards, 1994), the Flex Lab was designed to allow students the option of enrolling in college credit courses on a time schedule that fit into their lives. Fred Keller's Personalized System of Instruction (PSI) supports the structure of the Flex Lab which is intended to give students the time, assistance, and scheduling control to meet their needs. In doing so, it is believed that many of the reasons students drop out can be minimized or eliminated at the same time quality education is being provided (Richards, 1994).

The Flex Lab allows students to work independently, at home, the office, or in the classroom. By working at their own speed, students are able to move more quickly than a traditional classroom (often an option chosen by employees learning a new skill or program for work) or more slowly for those who find the pace too fast for personal mastery. Mastery of the concepts is the measuring stick for grading in the Flex Lab. Carefully constructed final projects require a student demonstrate mastery of the primary concepts in order to receive a passing grade. Those who do not demonstrate mastery are able to review the material and attempt the final assignment again. Assistance is available to students by phone, by computer, or in person during the Flex Lab's open hours (over 50 hours per week, including evenings and weekends) where instructors and assistants are available to work with students (Richards, 1994).

What Can Be Done?

Although self-paced study does provide better learning (Richards, 1994), it may or may not solve the problems causing students to drop out. In reviewing the literature available on this topic, there is an overwhelming body of recommendations and suggestions for improving the situation.

Over and over again, researchers have looked for a key to what causes students to drop out. By trying to determine who is at risk, appropriate action can be taken. Regarding a study done at Niagara County Community College in 1989, Feldman describes the purpose of the research:

> The purpose of this study was to identify predictors of attrition so that a student who may be at risk can be identified early, even before they begin classes. If certain factors are associated with an increase likelihood that a student will drop out, college personnel can be better prepared through specialized programs and/or services to intervene, and, hopefully may increase students' chances for program completion (Feldman, 1993).

This study found four factors (high-school grade-point average, age range of 20-24, minorities other than Asian, and part-time status) which were considered significant predictors of attrition.

In another study done on all community colleges in North Carolina in 1990, the purpose was defined as follows:

> The purpose of this study was to ascertain if there was a relationship between completion of an orientation course and higher retention and GPAs for new community college students [including the specific question] Are there differences in retention and GPAs among the students in the study related to age, gender, race, college entrance exam scores, college major, college attended, or employment status (Glass, 1995)?

This study found there was an apparent connection between higher retention and GPA and taking an orientation course, but that these differences

were not significantly related to age, gender, race, employment status, college major, college entrance exams,or college attended (Glass, 1995).

In a geographically closely-related study at San Juan College in New Mexico, the research was designed to "examine findings from several studies of student persistence and retention to shed light on factors influencing persistence at the college" (Moore, 1995). Their conclusions portray an accurate description of many of the students in New Mexico colleges.

> From this small sample of respondents, it is evident that students who enrolled for one semester in Fall 1992 are not a homogeneous group. It would not be accurate to characterize such students as either casual students who enrolled for personal interest only or, on the other hand, as dissatisfied customers who left before achieving their goal. Neither one is the case. Rather, many of these students had serious educational goals but were unable to continue due to family or job responsibilities. About half of the respondents achieved their initial goal in one semester and quarter of the respondents plan to take more courses sometime in the future.
>
> The many reasons given for not re-enrolling provide further evidence that attending college is only one of many issues in the lives of community college students, *and it is often not the most pressing issue*. Students attend community college with a variety of goals that are short-term and long-term; personal, education, and job-related. *For them, semester-to-semester persistence has very little meaning in terms of success, perseverance, or goal attainment* (italics added) (Moore, 1995).

In another closely related study, interesting results were obtained by measuring personality types and their relationship to student performance. This particular study is the closest in purpose and form to the current research and is summarized here in abstract form.

> An experiment was conducted to determine whether people who exhibit certain personality types and learning styles are more successful using a self-paced instructional package. Personality type was measured using the Myers Briggs Type Indicator (MBTI). Students in the College of Business at the University of Notre Dame were pretested using the MBTI. The subjects then studied the basic functions and procedures involved in using Lotus 1-2-3

> spreadsheet software package.... It was found that personality type tends to affect a student's success with self-paced instruction. For example, students who showed a preference for "thinking" performed 10 to 15 percent better than those who had a preference for "feeling." In addition, students with prior exposure to "canned" software in general and computer spreadsheets in particular performed better than others (Kern, 1987).

It was noted in several of the related studies, that students often give less than completely truthful answers when asked why they dropped out of a class or school all together. In order to preserve a sense of dignity, they may often blame their failure to complete a course on family or job responsibilities rather than admitting they were unprepared for the class, lacked commitment, or were otherwise unable to keep up (Price, 1993; Roghaar, 1996).

It is this same issue that lends itself to poor and inaccurate reporting of dropout rates. Bonham (1993) clarifies some of the confusing categories students put themselves into with regard to a study at Del Mar College in Corpus Christi, Texas:

> Stopping out is different from dropping out. Dropouts are persons who have not accomplished their educational goals but have given up trying. Stop outs are persons who have not accomplished their goals but plan to do so in the future. We gave the name "optouts" to persons who accomplished their self-defined goals without graduating or transferring. A common problem in community college reporting is that all non returning students are labeled dropouts, giving the school a poor retention record and making it difficult to study the patterns or cause of dropout or of stop out (Bonham, 1993).

The Flex Lab easily suffers from the stop-out or optout syndrome, as they offer a number of computer and secretarial courses and students may choose to leave when they reach a desired typing speed or proficiency level (Mohammadi, 1994), even if they have not formally completed the course. There is some discussion of measuring retention, not by completed classes and

degrees, but by goal attainment. Kenneth Coll (1992) defines student goal attainment as "students satisfactorily meeting the educational goals they want to accomplish at that college."

Summary.

Using these studies and others as a guide, it seemed appropriate and productive to conduct a study of the students in the Flex Lab using a survey to determine certain characteristics and compare the profiles that emerged with completion rates. The survey questions were derived from Flex Lab instructor input, administrative input, and the bulk of information previously studied on similar topics.

CHAPTER THREE
METHODOLOGY

Introduction.

Using the background provided by the extensive literature review, it seemed reasonable to conduct a study that would define certain characteristics and see if they had any bearing on the completion rates of the students enrolled in the Flex Lab. Since many of the studies in the past resulted in various conclusions, the survey included a number of those characteristics, such as age, work status, and student status as part of the survey. In addition, other characteristics believed to be of significance were included based on suggestions by Flex Lab staff and administrators.

Research Design.

Research Strategy.

The survey was designed as a simple information gathering instrument. It contained fourteen questions that the students answered (see Appendix A). Each question asked a student to select one of two or three answers in a multiple-choice format. Ten of the questions were simple fact-finding questions and did not require the students to make a judgment decision. Four questions required the student to express an opinion about themselves. The fifteenth question (Did the student complete the class?) was not on the survey the students were given. It was added and answered at the end of the time period by the Flex Lab staff.

The survey was administered during the mandatory orientation to Flex Lab courses by Flex Lab instructors. Students were given the survey during the orientation and filled it out prior to leaving the orientation meeting. Questions were answered on a standard scantron form. This direct method of administering the survey provided excellent validity and reliability of data.

Population Sample.

The survey was completed by all students enrolled in the Flex Lab starting with the September term. This included 148 students from 21 different classes offered during that term. Classes range from beginning to advanced and included students which are both new to the college and experienced students. No indication was made on the surveys as to which class the students were enrolled in.

The students came from the general population of the college, which is a diverse mix of primarily Hispanic, Native American and Caucasian students. Most are part-time students in their thirties with the majority being women. Self-paced classes in the Flex Lab are open to any student who meets the prerequisites and chooses to enroll.

Measurement of Variables.

It was supposed that the following hypotheses will be proven true by the results of this survey.

1) Students who have taken a self-paced study course before the current one will be more likely to complete the current course than those who have not.

2) Students who have basic computer knowledge prior to beginning a self-paced study class are significantly more likely to complete self-paced study courses than those who do not.

3) Student perceptions of their ability to complete self-paced study have significant bearing on their completion rates.

4) Students who have been self-employed are significantly more likely to complete self-paced study courses than those who have not.

5) Students who do not have full-time jobs while they are enrolled in self-paced study courses are significantly more likely to complete those courses than those working full time.

6) Students who do not have children to care for regularly while enrolled in school are significantly more likely to complete their courses than those who care for children during that time.

7) Students who are paying for their own education (including the current class) are more likely to complete self-paced study courses than those who have the class paid for by someone else.

8) Students who can type 30 words per minute or more prior to beginning a self-paced study course are significantly more likely to complete self-paced study courses than those who cannot.

9) Students who enroll in a self-paced study course that is a requirement of their current degree program are more likely to complete that course than those for whom it is not a requirement.

10) Students who enroll in a self-paced study course because it is the only offering of that course and who are willing to state they would prefer to take that same class in a traditional format are less likely to complete that self-paced study course than those who want to take the course in a self-paced format.

11) Students who are currently enrolled in at least six other credits at

the same time are more likely to complete a self-paced study course than those enrolled in less than six credits.

12) First year college students (directly out of high school) are less likely to complete self-paced study courses than older students.

13) Students over the age of 40 are more likely to complete self-paced study courses than those under the age of 40.

14) Female college students are more likely to complete self-paced study courses than male students.

Research Instrument.

The survey was a simple instrument (see Appendix A) and was first designed as a draft that was reviewed by the Flex Lab Coordinator and the current faculty. Several questions were simplified and made to be as direct as possible. Choices were limited to no more than three answers (in most cases two answers) to further simplify the data analysis process.

The survey was limited to fourteen questions. This was done to minimize the amount of time students would need to spend during their orientation time and to hone in on specific areas of interest. Inasmuch as this was the first survey of this sort to be done in the Flex Lab, it was a preliminary research instrument to determine whether further definitive studies of this sort would produce useful information.

Sampling Methods and Procedures.

The particular group of students included in this survey were the students enrolled in the September term in the Flex Lab. This is generally the busiest

time of year as students return to school during the traditional Fall Semester. All 148 students enrolled in September participated in the survey.

The orientation sessions for the Flex Lab are standardized and include a video and basic information on the general procedures and schedule for the current term. At the conclusion of the standard information, students are given their individual workbooks. They are then required to complete an information sheet with data such as name, contact numbers and any personal information they would like to offer in the form of an introduction to their instructor. They also are asked to fill out, prior to leaving the orientation meeting, a schedule of projected completion dates for each of the modules in their workbook. It was during this time they were given the survey to fill out. The introductory comments on the survey itself were reiterated by the instructors when explaining the required paperwork. Students were not permitted to take the paperwork with them, but had to complete and return it before leaving the orientation session.

Santa Fe Community College allows students to withdraw from a course up to the final day of the term, therefore, students have the option of protecting themselves from a failing grade by simply withdrawing. In certain instances, the instructor can also request the student be withdrawn rather than issuing an "F." Therefore, students either completed the course with a passing grade ("completed") or withdrew, transferred to a traditional class equivalent or failed ("did not complete").

Once the surveys were completed by the students, they were held by the Flex Lab staff until the Fall Semester at Santa Fe Community College ended. The surveys were then updated by the college staff indicating whether or not students had successfully completed their courses.

Analytical Methods.

After compiling the survey results into a spreadsheet (Appendix B), the data was analyzed in two ways. All information from the survey was used to create a Frequency Distribution and Bar Charts (Appendix C). Secondly, a Chi-Square statistic was used to determine how well the survey data fit the expected hypotheses (Appendix D). All analysis was done by the University of Phoenix Data Analysis Service.

The frequency distributions and the accompanying bar charts provide a solid look at the collected data. It showed a profile of the students enrolled in the Flex Lab during this time period. No distinction was used to differentiate on this statistical test whether students completed the course or not.

The Chi-Square statistic was used to compare each characteristic with the completion rates of the course. All fourteen student-answered questions were analyzed with regard to the completion of the class, showing the relationships between each set of answers and the group of students that completed the course versus the group that did not.

Summary.

The data collection process for this survey was completed according to plan in a relatively simple and straightforward survey. With a 100 percent inclusion rate for the students enrolled in the Flex Lab during this period of time, the data not only provided an excellent sampling of students in the Flex Lab, but was collected in a manner that provided for reliable and valid data.

Statistical analysis was done to reflect the relationship between the survey questions and the proposed hypotheses, as well as providing a profile of

all students enrolled regardless of class completion. The results of this survey are further developed in Chapter Four "Results and Findings."

CHAPTER FOUR
RESULTS AND FINDINGS

Introduction.

Once the data from the survey had been analyzed and presented statistically and graphically by the University of Phoenix Data Analysis Service, two patterns emerged. The first allows the researchers to examine the profiled of Flex Lab students in general, which had not been collected previously. The second, showed a comparison of the two groups based on whether or not they completed the class. Unfortunately, the data showed that there were only minor deviations of significance for any of the fourteen defined characteristics and whether or not the students completed the class.

Results.

All of the 148 students enrolled in the Flex Lab for the September-December, 1997 Session participated in the survey. Orientations for these students were held on September 2, 3, and, 4. The surveys were included as part of the orientation to the Flex Lab which is a mandatory beginning to the course. The Flex Lab staff did an excellent job in ensuring the students did not progress to the core of the course without meeting all of the orientation requirements, including the survey. There were seven questions overall which were left blank or not answered on the 148 surveys.

The 148 students were enrolled in twenty-one different classes offered for college credit in the Flex Lab during that session. Those classes included:

- Keyboarding
- Introduction to Microcomputers on the IBM PC
- Introduction to Excel 97 on the IBM PC
- Intermediate Excel 97 on the IBM PC
- Intermediate Word 97 on the IBM PC
- Introduction to Word 97 for Windows
- Keyboarding II
- Introduction to Windows 95
- Introduction to Access 97 for Windows
- Introduction to Access 97 for Windows
- Keyboarding Speed and Accuracy I
- Intermediate Access 97 for Windows
- Introduction to Lotus 1-2-3 for Windows
- Document Production with WordPerfect 6.1 for Windows
- Introduction to PowerPoint 97 for Windows
- Introduction to the Information Superhighway
- Introduction to WordPerfect 6.1 for Windows
- Intermediate WordPerfect 6.1 for Windows
- Keyboarding Speed and Accuracy II
- Keyboarding Speed and Accuracy III
- Desktop Publishing with WordPerfect 6.1 for Windows
- Introduction to Computer Graphics on the Mac

Findings.

The purpose of this survey was to correlate the answers to the fourteen questions with the students' completion of the class. By examining the patterns that emerged from these answers, a profile could be established which would give administrators and faculty some guidelines in counseling students enrolling in self-paced study courses.

The survey, which is found in Appendix A, contained the fourteen following questions. Question 15 (Did the student complete the class? A) Yes B) No) was added and answered by the Flex Lab Staff at the end of the September Session. The raw data from the survey is contained in Appendix B. Following each question below, in italics, are the survey results as they apply to all students surveyed with no differentiation between those who finished the class and those who did not (Appendix C). Following the italics is a breakdown which compares those students who completed the course and those that did not. Detailed statistical information is in Appendix D.

In a surprising result, the Chi-Square survey results (Appendix D) showed that there was relatively minor differences between the groups that finished and did not. Results were proportionally even (except for a few minor deviations) among those students who finished the courses and those that did not. Further comparison and interpretation follows in Chapter Five.

1) Is this your first self-paced study course?
A) Yes B) No

61 percent of the students enrolled in a self-paced class for the first time.

Of the 61 percent that were enrolled in a self-paced course for the first time, 68 percent completed the class and 32 percent did not. Of the 39 percent that had taken a self-paced class before, 71 percent completed the class and 29 percent did not.

2) Although not necessarily required, do you have a basic knowledge of computers prior to starting this self-paced course?

A) Yes B) No

78 percent of the students claimed to have basic computer knowledge.

Of the 78 percent that claimed to have basis computer knowledge, 71 percent completed the class and 29 percent did not. Of the 22 percent that did not have any basic computer knowledge, 63 percent completed the class and 37 percent did not.

3) Do you believe you will be able to complete this self-paced study course within the time allotted?

A) Yes B) No

100 percent of the students stated they would finish the class on time.

Of the 100 percent of the students that believed they would finish the class 69 percent completed the class and 31 percent did not.

4) Have you ever been self-employed?

A) Yes B) No

37 percent of the students had been self employed.

Of the 37 percent that had been self-employed, 69 percent completed the class and 31 percent did not. Of the 63 percent that had not been self-employed, 69 percent completed the class and 31 percent did not.

5) While taking this class are you

A) Unemployed B) Working part-time C) Working full-time

27 percent of the students were unemployed ; 32 percent were employed part-time; and 41 percent were employed full time.

Of the 27 percent that were unemployed, 70 percent completed the class and 30 percent did not; of the 32 percent who were employed part-time, 83 percent completed the class and 17 percent did not; and of the 41 percent who were employed full time, 57 percent completed the class and 43 percent did not.

6) Do you have children you regularly care for as part of your family responsibilities?

A) Yes B) No

29 percent of the students regularly cared for children as part of their family responsibility.

Of the 29 percent who regularly cared for children, 84 percent completed the class and 16 percent did not; and of the 71 percent who did not regularly care for children, 63 percent completed the class and 37 percent did not.

7) This self-paced study course is being paid for by:

A) Me B) My parents or relatives C) Scholarship, other

59 percent of the students paid for the class themselves; 4 percent had their parents pay for the class; and 37 percent had the class paid for by scholarship or other sources.

Of the 59 percent of the students who paid for the class themselves, 63 percent completed the class, and 37 percent did not; of the 4 percent whose parents paid for the class, 67 percent completed the class and 33 percent did not; and of the 37 percent that had other sources pay for the course, 78 percent completed the class and 22 percent did not.

8) Please indicate your approximate typing speed.

A) None B) Less than 30 words per minute C) More than 30 words per minute

15 percent of the students had no typing skill; 47 percent had a typing speed of less than 30 words per minute; and 38 percent had a typing speed of more than 30 words per minute.

Of the 15 percent that had no typing skill, 50 percent completed the class and 50 percent did not; of the 47 percent that had a typing speed of less than 30 words per minute, 74 percent completed the class and 26 percent did not; and of the 38 percent that had a typing speed of more than 30 words per minute, 70 percent completed the class and 30 percent did not.

9) Is this self-paced study class a requirement for your current degree program?

A) Yes B) No

22 percent of the students were taking a class that was required for their

degree program.

Of the 22 percent for whom the class was required, 67 percent completed the class and 33 percent did not. Of the 78 percent for who the class was not required, 70 percent completed and 30 percent did not.

10) If this class were offered in a traditional classroom setting, would you prefer to take it that way?

A) Yes B) No

25 percent of the students would prefer to take the class in a traditional classroom format.

Of the 25 percent that would have preferred a traditional class, 64 percent completed the class and 36 percent did not. Of the 75 percent that preferred the self-paced format, 70 percent completed the class and 30 percent did not.

11) While taking this course, how many <u>total</u> credits are you enrolled in?

A) 1-5 B) 6-11 C) 12 or more

55 percent of the students were enrolled in 1-5 credit hours; 26 percent were enrolled in 6-11 credit hours; and 17 percent were enrolled in 12 or more credit hours.

Of the 55 percent that were enrolled in less than 5 credits, 65 percent completed the class and 35 percent did not; of the 26 percent who were enrolled in 6-11 credits, 72 percent completed the class and 28 percent did not; and of the 17 percent who were enrolled in 12 or more credits, 81 percent completed the class and 17 percent did not.

12) Did you graduate from high school within the last twelve months?

A) Yes B) No

9 percent of the students had graduated from high school within the last year.

Of the 9 percent that were recent high school graduates, 71 percent completed the class and 29 percent did not. Of the 91 percent that were not recent high school graduates, 69 percent completed the class and 31 percent did not.

13) Please indicate your age bracket.
A) Under 40 B) Over 40

55 percent of the students were less than 40 years of age.

Of the 55 percent that were less than 40, 65 percent completed the class and 35 percent did not. Of the 45 percent that were 40 and older, 73 percent completed the class and 27 percent did not.

14) Please indicate your gender.
A) Male B) Female

56 percent of the students were women.

Of the 56 percent of the students that were women, 62 percent completed the class and 38 percent did not; and of the 44 percent of the students that were men, 75 percent completed the class and 25 percent did not.

15) Did the student complete the class?
A) Yes B) No

69 percent of the students completed the course.

It is not believed there was any event during the collection or processing of the data that would discount these results. They are considered to be valid and reliable.

The Frequency Distribution and Bar Charts (Appendix C) show a good profile of the students enrolled. The Chi-Square Statistical comparison shows where significant differences existed between the groups.

Summary.

The profile that emerged from this study demonstrates there are some characteristics which have a tendency to effect students' ability to complete self-

paced study courses. Certainly not all of the areas in the survey showed a significant difference, however, it is a strong foundation for further study and a good basis for Flex Lab student analysis. Of equal importance is the overall profile that emerged from the students in this sample population. The characteristics defined by these survey results will be helpful in implementation and further development of the Flex Lab program.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

Introduction.

In accordance with the purpose of this study, further information has been revealed on the study body of the Flex Lab. Since research such as this provides information that isn't simply predictable, it is often the case that the results pose new questions in addition to those they answer. The results from this survey provide useful information and also lay the groundwork for further research along expanded lines. When these results are interpreted within the body of literature, even more useful analysis is possible.

Conclusions of Data Analysis and Literature Review.

The data was analyzed in two ways. The first showed a profile of all students in the sample population and the second attempted to draw a conculsionary profile from certain characteristics and their correlation to which students completed the course and which did not.

The profile of the students as a whole is an interesting look at the student group and provides useful information for marketing, class options, and internal policies within the Flex Lab. The results discussed here in paragraph form do not reflect any division between those students who completed the class and those who did not. Following the general results, is a chart for each question comparing those who finished with those who did not.

61 percent of the students were enrolled in a **self-paced class for the first time** and 39 percent were repeat students. This is an encouraging trend as a fair number of students are coming back for more self-paced study courses. Additionally, the majority of the students are new to the Flex Lab, which shows that the option of self-paced study continues to meet the needs of Santa Fe's student body.

	Completed	Did Not Complete
First Self-Paced Course	68 percent	32 percent
Previous Self-Paced Course	71 percent	29 percent

There is no significant difference between the groups in this area.

78 percent of the students claimed to have **basic computer knowledge**. This is an excellent background for many of the self-paced computer classes developed that require some computer knowledge and it is helpful to know that such a large percentage of the students have that experience. One of the classes taught in the Flex Lab is an introductory course to computers, so it would be expected that those students did not have a basic computer background before beginning that course.

	Completed	Did Not Complete
Had Computer Knowledge	71 percent	29 percent
No Computer Knowledge	63 percent	37 percent

There is a less than 10 percent difference between the groups in this area.

100 percent of the students **believed they would be able to finish the class** on time. This is particularly interesting in light of the research done which showed that students often do not give accurate information on surveys such as this one. Instead of an honest answer, the "right" answer is given thereby protecting the self-esteem of the student (Price, 1993; Roghaar, 1996).

Having worked with a number of students in the Flex Lab personally, it is the researcher's opinion that many of the students are apprehensive about self-paced study and don't believe they have the self-discipline to complete the course.

	Completed	Did Not Complete
Believed they would complete	69 percent	31 percent

37 percent of the students **had been self employed** which gives the Flex Lab Staff valuable information when deciding which classes to offer in the Flex Lab. Santa Fe's Small Business Administration has worked closely with the Flex Lab and often recommends the self-paced courses for those who are working on their own schedule and have demonstrated an interest and ability to be self-motivated.

	Completed	Did Not Complete
Had Been Self-Employed	69 percent	31 percent
Had Not Been Self-Employed	69 percent	31 percent

There is no difference between the groups in this area. It is interesting to note, however, that the same exact breakdown between "Completed" and "Did Not Complete" exists for Question Three (Do you believe you will complete this class?) and Question Four (Have you ever been self-employed?). The statistical analysis for this study did not include an examination of this result.

41 percent of the students **were employed full-time**; 32 were employed part-time; and 27 percent were unemployed while taking this course. This is in line with the general population of the community and the student body and further undermines the fact that most students are not full-time students and have other priorities which can take precedence in their lives. Self-paced study remains a good option for these students as it provides a very flexible format.

	Completed	Did Not Complete
Unemployed	70 percent	30 percent
Employed Part Time	83 percent	17 percent
Employed Full Time	57 percent	43 percent

There is a significant difference between students who worked part-time and those who did not. It is interesting to note that students who worked part-time had a better completion rate than those who were unemployed and than those who worked full time. Although research showed that full-time students have a better completion rate, it cannot be assumed that students who are unemployed are full-time students.

29 percent of the students **regularly cared for children** as part of their family responsibility. This is a relatively low percentage, but still represents another aspect of the student body that can appreciate and benefit from flexible class options. It also is useful information for the college in general as they look at expanding child care options for students.

	Completed	Did Not Complete
Cared for Children	84 percent	16 percent
Did Not Care for Children	63 percent	37 percent

There is a significant difference between these two groups. Although the group caring for children was much smaller than those who did not, they seemed to have a greater ability to manage their time and fulfill their commitments.

59 percent of the students **paid for the class themselves**; 4 percent had their parents pay for the class; and 37 percent had the class paid for by scholarship or other sources. This is also helpful information for the administration in planning lab fees and required texts for students as they consider the total cost of taking a course.

	Completed	Did Not Complete
Paid for the Class Themselves	63 percent	37 percent
Parents Paid for the Class	67 percent	33 percent
Other Sources Paid for Class	78 percent	22 percent

There is relatively no difference between those who paid for the class themselves and those whose parents paid for it, but there is a significant difference for those who have a scholarship or other source paying for it. This may be directly linked to the fact that scholarships often require the student to maintain a certain number of credits and passing grades.

15 percent of the students **had no typing skill**; 47 percent had a typing speed of less than 30 words per minute; and 38 percent had a typing speed of more than 30 words per minute. Since the beginning typing class is offered as part of the Flex Lab curriculum, it is appropriate that some students would have no typing ability when starting their course. Since the majority had a relatively slow typing speed, this should be kept in mind when developing assignments and estimating the amount of time it make take students to complete typed work.

	Completed	Did Not Complete
No Typing Skill	50 percent	50 percent
30 Words Per Minute or Less	74 percent	26 percent
30 Words Per Minute or More	70 percent	30 percent

There is relatively no difference between the groups that had typing skills, but there is a significant difference between them and those without typing skill. This information should be considered when developing prerequisites for Flex Lab classes.

22 percent of the students were taking **a class that was required for their degree** program. This largely supports the idea that the majority of the students in the community college are not degree-seeking students, but are after specific skills (Moore, 1995).

	Completed	Did Not Complete
Required Course	67 percent	33 percent
Not a Required Course	70 percent	30 percent

There is a relatively minor difference between the groups in this area.

25 percent of the students would **prefer to take the class in a traditional classroom format** rather than a self-paced format. Some classes in the Flex Lab are offered in both formats, but the majority are not. Experience has shown that students who prefer a traditional format are not confident in their ability to exercise the self-discipline required to complete the course.

	Completed	Did Not Complete
Preferred Traditional Course	64 percent	36 percent
Preferred Self-Paced Format	70 percent	30 percent

There is relatively minor difference between the groups in this area, although students should be encouraged to take the traditional course if it is available and they feel strongly about. Oftentimes, it is not available.

55 percent of the students were **enrolled in 1-5 credit hours**; 26 percent were enrolled in 6-11 credit hours; and 17 percent were enrolled in 12 or more credit hours. These numbers well support the student body description that shows that most students are not studying full-time (SFCC, 1994). It is interesting to note that the majority are taking five or less credits.

	Completed	Did Not Complete
Less Than Five Credits	65 percent	35 percent
Enrolled in 6-11 Credits	72 percent	28 percent
Enrolled in 12 or more	81 percent	17 percent

The differences between these groups is consistent with previous research that shows that full-time students have a much higher retention rate than part-time students.

9 percent of the students had **graduated from high school within the last year**. This is an incredibly low number of traditional aged college freshman. Since this survey was conducted during the fall semester, this would

have been the first college semester for many students. The first semester is often filled with predetermined courses which primarily include traditional and well-supported classes. Should this same survey be conducted during the spring semester, it is probable there would be a higher number of college freshman enrolled in the Flex Lab.

	Completed	Did Not Complete
Recent High School Grads	71 percent	29 percent
Not Recent High School Grads	69 percent	31 percent

There is relatively no difference between the groups in this area.

55 percent of the students were **less than 40 years of age** and 56 percent of the students **were women**. This reflects the standard community of Santa Fe and provides valuable information for marketing activities.

	Completed	Did Not Complete
Less Than 40 Years Old	65 percent	35 percent
40 Years Old or More	73 percent	27 percent

There is a minor difference between the groups in this area. This reflects older students doing a bit better at completing classes, although this is not particularly consistent with previous research.

	Completed	Did Not Complete
Female	62 percent	38 percent
Male	75 percent	25 percent

There is a significant difference between the groups in this area. It would be interesting to further study this difference with relationship to age and other factors.

69 percent of the students completed the course, leaving a 31 percent withdrawal rate. In light of the literature review and previous research, this is actually a very low withdrawal rate. With Santa Fe's student body consisting

largely of Hispanics and Native Americans, part-time students, and low income socioeconomic backgrounds, the withdrawal rate would be predicted at closer to 50 percent (Mohammadi, 1994; Price, 1993). Further supporting a higher drop out rate is the fact that community colleges are well-documented to have a higher attrition rate than four-year colleges.

It is the opinion of this researcher that the extensive support and flexibility offered by the Flex Lab has resulted in an exceptionally low drop out rate as compared to national averages and predicted retention rates based on the nature of the community at large. Further analysis of the data when grouped by completion of the course or failure to complete provides a look at how certain characteristics effected drop out rates within the student population. Several areas do stand out as showing significant differences between the groups. These areas are:

1) Basic computer knowledge results in a higher completion rate;
2) Part-time students had a higher completion rate;
3) Regularly caring for children results in a higher completion rate;
4) Scholarship students had a higher rate of completion;
5) Students with some typing skill had a higher rate of completion;
6) Full-time students had a higher rate of completion; and
7) Male students had a higher rate of completion.

In evaluating these results, it is apparent that there are some characteristics which tend to result in a higher completion rate. This information will be useful for guidance counselors, marketing administrators, and Flex Lab instructors and staff as they work with students interested in self-paced study. Although these specific areas showed a significant tendency toward higher completion rates, this information must be incorporated into the full body of knowledge on self-paced study to be used most effectively.

Effects of Limitations.

Due to the diligence of the Flex Lab Staff, the survey was able to have a 100 percent participation rate by the population sample. The manner in which the survey was administered and collected in a timely manner provided high reliability and validity. There are several other areas where the study could have been expanded if further information had been available from the college and if the Flex Lab chooses to continue this survey or others like it, they may choose to include comparison data.

It would be interesting to compare the drop out rate from the college as a whole with that of the Flex Lab, and to compare the drop out rate from the matching traditional classes (where they are offered) with that of the drop out rate in the Flex Lab for those same classes. It might also be of interest to expand the study to include other self-paced study programs at other community colleges in the region and make comparisons between their traditional programs and self-paced programs. Glendale Community College in Maricopa County, Arizona, has an extensive self-paced study program and was one of the formats used in developing the Flex Lab.

Although these areas of expansion would provide an additional body of information to compare and analyze the date from Santa Fe Community College, its exclusion from this study does not compromise the validity of this research. The data collected within the confines of the Flex Lab environment is pertinent and useful for a preliminary study into the retention rates of this program.

Recommendations to Management.

Based on the results of this research project and a review of the existing body of literature on the subject, recommendations are as follows.

1) It is suggested that the Flex Lab continue to survey their incoming students. Although the survey may be modified to collect varying data, it provides an excellent overview of the student body as a whole in the Flex Lab.

2) It is suggested that the Flex Lab modify the end-of-class survey to collect additional data that may be related to the incoming student survey and would show a "before-and-after" picture of student opinions.

3) It is suggested that the Flex Lab conduct some type of end-of-class survey of students that drop out, even if it only consisted of one question, asking the student to define their personal reason for dropping out. Often, the instructor and the student have discussed this prior to the student dropping out.

4) It is suggested that the Flex Lab continue its highly supportive environment which seems to be a major factor contributing to the high retention rate in the Flex Lab.

5) It is suggested that the Flex Lab administration and campus counselors be made aware of the characteristics of students with a better retention rate and use that information to guide students towards classes that best fit their needs.

Implications.

At the close of any research study, it is important to reflect on the purpose of the study, the motivations for conducting the study, and the reasons for

choosing the designated approach. This study was conducted to find a profile of successful students for a self-paced study program. The information revealed from this research is significant and previously unavailable.

The study done at Notre Dame that measured success rates of a self-paced computer class by testing of the Meyers-Briggs personality indicators showed more of a distinct aptitude for self-paced study. It may be worthwhile to pursue some type of study that further reflects aptitudes rather than personal data and accomplishments. By combining personal data from students that dropped out (including their own designation for the reason they dropped out) with an aptitude type of testing, it may be possible to produce more useful results for the ongoing study of student success in self-paced study programs.

APPENDIX A

SURVEY INSTRUMENT

SELF-STUDY SURVEY

This survey is part of a graduate research project designed to assist students and faculty with self-paced education. All answers should be made on the accompanying scantron form.

1. Is this your first self-paced study course?
A) Yes
B) No

2. Although not necessarily required, do you have a basic knowledge of computers prior to starting this self-paced course?
A) Yes
B) No

3. Do you believe you will be able to complete this self-paced study course within the time allotted?
A) Yes
B) No

4. Have you ever been self-employed?
A) Yes
B) No

5. While taking this class are you
A) Unemployed
B) Working part-time
C) Working full-time

6. Do you have children you regularly care for as part of your family responsibilities?
A) Yes
B) No

7. This self-paced study course is being paid for by:
A) Me
B) My parents or relatives
C) Scholarship or other funding

8. Please indicate your approximate typing speed.
A) None
B) Less than 30 words per minute
C) More than 30 words per minute

9. Is this self-paced study class a requirement for your current degree program?
A) Yes
B) No

10. If this class were offered in a traditional classroom setting, would you prefer to take it that way?
A) Yes
B) No

11. While taking this course, how many total credits are you enrolled in?
A) 1-5
B) 6-11
C) 12 or more

12. Did you graduate from high school within the last twelve months?
A) Yes
B) No

13. Please indicate your age bracket.
A) Under 40
B) Over 40

14. Please indicate your gender.
A) Male
B) Female

Thank you for participating in this survey. The results will help us to structure future Flex Lab offerings for greater student success.

APPENDIX B

SURVEY RESULTS

IN SPREADSHEET FORM

FLEX LAB SURVEY RESULTS

1=A; 2=B; 3=C; BLANK = NO ANSWER

ID	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	Q-12	Q-13	Q-14	Q-15
0186	1	1	1	2	1	1	3	3	2	2	2	2	2	2	1
0263	2	1	1	2	2	2	1	3	2	2	1	2	2	1	1
0285	1	1	1	2	1	1	3	3	1	2	2	2	1	1	2
0349	2	1	1	1	3	2	1	3	1	2	1	2	2	2	2
0381	1	2	1	1	3	2	1	2	2	1	1	2	1	2	1
0479	2	1	1	2	1	1	1	3	2	2	1	2	2	2	1
0520	1	1	1	2	2	2	3	1	2	2	3	1	1	1	1
0616	1	1	1	2	3	2	3	3	2	2	3	1	1	2	2
0659	1	1	1	2	2	2	1	3	2	1	1	2	2	2	1
0714	1	2	1	2	2	1	1	1	2	1	1	2	2	2	1
0761	1	1	1	2	1	1	3	3	2	2	2	2	1	2	1
0768	1	1	1	2	3	2	3	2	2	2	1	2	2	1	1
0774	2	1	1	1	2	2	1	3	2	2	1	2	2	2	1
0783	2	1	1	1	2	2	1	2	2	1	3	2	1	1	1
0881	2	1	1	1	2	2	3	2	2	2	2	2	1	1	1
0989	1	1	1	1	2	1	1	3	2	1	1	2	2	2	1
1016	1	1	1	1	3	2	2	2	2	1	1	2	1	1	2
1083	1	1	1	2	2	2	3	2	2	2	2	2	1	2	1
1086	1	1	1	2	3	2	1	2	2	1	2	2	1	1	2
1086	1	1	1	2	3	1	3	2	2	2	1	1	1	1	1
1111	1	2	1	2	1	2	3	3	2	1	2	2	1	2	1
1152	1	2	1	2	3	2	1	2	2	2	1	2	2	2	1
1286	2	1	1	1	3	2	1	2	1	2	2	2	2	2	1
1298	1	1	1	1	2	2	1	2	2	2		2	2	1	2

FLEX LAB SURVEY RESULTS

1=A; 2=B; 3=C; BLANK = NO ANSWER

ID	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	Q-12	Q-13	Q-14	Q-15
1365	1	1	1	2	2	2	3	2	2	2	3	1	1	2	1
1582	1	1	1	1	3	2	3	3	1	1	2	2	2	1	1
1676	2	2	1	2	2	2	1	2	2	2	1	2	2	1	1
1680	2	1	1	2	3	2	3	2	2	1	1	2	1	1	1
1803	1	1	1	2	3	2	1	3	2	1	1	2	1	2	2
1881	1	1	1	2	3	1	1	3	2	1	1	2	1	2	1
1889	1	1	1	2	3	2	1	3	2	2	1	2	1	2	2
1916	1	1	1	1	2	1	3	2	2	2	3	2	1	2	1
1999	1	1	1	2	1	1	3	2	2	2	2	2	1	2	1
2033	2	1	1	2	3	2	1	2	2	2	1	2	1	2	2
2035	2	2	1	2	3	2	1	3	2	2	1	2	2	2	2
2043	2	1	1	1	2	1	1	3	1	2	1	2	1	2	1
2110	1	2	1	1	3	2	1	1	2	2	2	2	1	1	2
2291	2	1	1	2	3	2	1	1	2	2	1	2	1	1	2
2322	2	2	1	1	3	2	1	3	2	2	1	2	2	1	1
2375	1	2	1	2	1	1	3	3	2	2	1	2	1	2	2
2377	2	1	1	1	1	2	3	3	2		2	2	2	2	1
2487	1	2	1	2	3	2	1	1	2	2	2	2	1	2	2
2641	2	1	1	2	3	2	1	2	2	2	1	2	1	1	1
2699	1	1	1	2	1	2	2	1	1	2	1	2	1	1	2
2703	1	1	1	1	3	2	1	3	2		1	2	2	2	1
2735	1	2	1	1	2	1	1	1	2	1	1	2	2	1	2
2925	2	1	1	1	2	1	3	3	1	2	3	2	1	2	1
3069	1	2	1	2	1	2	3	3	2	2	2	2	1	2	1

FLEX LAB SURVEY RESULTS

1=A; 2=B; 3=C; BLANK = NO ANSWER

ID	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	Q-12	Q-13	Q-14	Q-15
3078	1	1	1	1	3	2	1	3	1	2	1	2	1	2	1
3118	1	1	1	1	2	2	1	3	2	2	1	2	2	1	1
3421	1	1	1	2	1	2	3	3	2	2	2	2	1	2	1
3442	2	1	1	2	3	1	1	2	1	1	1	2	2	1	2
3638	1	1	1	2	3	2	3	2	2	1	1	2	1	1	1
3689	1	1	1	1	2	1	3	1	1	2	3	2	2	1	2
3703	1	1	1	2	2	2	1	3	1	2	3	2	1	2	1
3779	1	1	1	2	3	2	3	3	2	1	1	2	2	2	2
3787	2	2	1	2	3	2	1	2	2	2	1	2	1	1	1
4004	2	1	1	1	2	2	1	2	2	1	1	2	2	2	1
4051	2	1	1	2	3	2	1	2	2	2	1	2	1	2	1
4114	1	1	1	1	3	2	2	3	1	2	2	2	1	2	1
4202	2	1	1	2	2	1	3	3	2	2	3	2	1	2	1
4222	2	1	1	1	3	2	3	2	2	2	2	2	1	1	2
4310	2	2	1	1	1	1	1	2	2	2	1	2	2	1	1
4366	1	1	1	1	3	1	1	3	1	2	1	2	2	2	1
4381	1	1	1	2	2	2	1	2	1	2	2	2	1	1	1
4502	1	1	1	1	1	2	3	1	1	1	3	2	2	1	1
4551	2	1	1	2	3	1	3	2	2	2	1	2	2	1	1
4554	1	1	1	1	3	2	1	2	2	2	1	2	1	2	2
4567	1	2	1	2	1	2	1	1	2	2	2	2	1	2	2
4612	1	2	1	1	2	2	3	1	2	1	1	2	2	1	1
4701	2	1	1	2	1	2	1	2	2	2	1	2	2	1	1
4748	2	1	1	1	2	2	1	3	3	3	1	2	1	2	1

FLEX LAB SURVEY RESULTS

1=A; 2=B; 3=C; BLANK = NO ANSWER

ID	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	Q-12	Q-13	Q-14	Q-15
4776	1	1	1	2	3	2	1	2	2	2	1	2	2	1	1
4804	1	1	1	2	3	2	1	2	2	1	1	2	2	1	1
4865	1	2	1	2	3	2	1	1	2	2	1	2	1	1	2
5036	1	1	1	2	3	2	1	2	2	1	1	2	1	1	2
5165	1	1	1	1	3	1	1	3	2	2	1	2	2	1	1
5274	1	2	1	2	1	1	3	2	2	2	2	1	1	2	1
5296	1	1	1	2	2	2	3	1	2	1	2	2	1	2	1
5323	1	1	1	2	2	2	1	2	1	2	3	2	1	2	1
5445	1	1	1	1	2	2	1	2	2	2	1	2	2	1	1
5569	1	2	1	2	1	1	2	1	2	2	2	2	1	2	1
5607	1	1	1	2	1	1	3	2	1	1	2	2	1	2	1
5697	2	1	1	2	3	1	3	2	2	2	1	2	2	1	1
5717	2	1	1	2	2	2	1	3	1	2	3	2	1	2	1
5736	1	1	1	2	1	2	1	3	2	2	1	2	2	2	2
5743	2	1	1	2	2	2	1	2	2	2	1	1	2	1	1
5915	2	2	1	1	2	2	1	2	2	2	3	2	2	2	1
5992	1	1	1	1	3	1	3	3	1	2	1	2	1	1	1
6000	1	2	1	2	1	1	1	2	2	2	2	2	1	2	2
6074	1	2	1	1	3	2	1	2	2	2	1	2	2	1	1
6095	2	1	1	2	1	2	1	2	2	2	1	2	2	1	1
6175	2	1	1	2	1	1	3	1	2	2	2	2	2	1	2
6298	1	2	1	2	1	2	1	3	1	2	1	1	1	1	2
6349	1	1	1	1	2	2	1	2	2	2	1	2	2	1	1
6360	1	2	1	2	2	1	3	2	2	2	3	1	1	2	1

FLEX LAB SURVEY RESULTS

1=A; 2=B; 3=C; BLANK = NO ANSWER

ID	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	Q-12	Q-13	Q-14	Q-15
6423	2	1	1	1	2	2	3	3	2	1	3	2	2	2	2
6609	1	1	1	2	3	2	1	3	2	2	2	1	2	2	2
6719	2	1	1	2	3	1	3	3	1	2	2	2	2	1	1
6791	1	1	1	2	3	1	1	3	1	2	1	2	2	1	1
6814	1	1	1	2	3	2	1	3	2	2	1	2	1	1	1
6865	1	1	1	2	1	1	1	1	1	1	1	2	1	2	1
6898	2	1	1	1	3	1	1	3	2	2	1	2	2	2	1
6942	2	1	1	1	3	2	1	3	2	2	1	2	1	2	2
6990	2	1	1	1	3	2	1	3	2	2	1	2	2	2	2
7000	1	1	1	2	3	2	1	3	2	1	2	2	1	1	1
7127	2	1	1	2	3	2	1	3	1	2	1	2	1	1	2
7446	2	1	1	1	1	2	1	3	2	2	1	2	2	2	2
7461	1	2	1	1	2	2	1	2	2	2	1	2	2	1	2
7589	1	1	1	2	1	2	3	2	1	2	3	1	1	1	1
7593	2	1	1	2	3	1	1	3	2	2	1	2	2	1	1
7615	2	1	1	2	2	1	2	3	2	2	3	2	1	2	1
7640	1	1	1	1	2	2	1	1	2	2	3	2	1	1	1
7646	1	1	1	1	2	2	1	2	2	1	1	2	1	1	2
7793	2	1	1	1	3	1	3	3	2	2	3	2	1	2	1
7850	1	1	1	2	2	2	1	2	2	1	1	2	1	2	1
7909	2	1	1	2	2	1	3	3	1	2	2	2	1	2	1
8251	2	1	1	2	3	2	1	2	2	2	1	2	1	1	2
8264	2	1	1	2	3	2	1	2	2	2	1	2	1	1	2
8371	1	1	1	1	3	2	1	2	2	2	1	2	2	2	1

FLEX LAB SURVEY RESULTS

1=A; 2=B; 3=C; BLANK = NO ANSWER

ID	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	Q-12	Q-13	Q-14	Q-15
8391	2	1	1	2	1	2	2	2	1	2	2	2	2	2	1
8408	1	1	1	2	1	1	3	2	2	2	3	2	1	2	1
8459	1	1	1	2	2	2	1	3	2	2	1	2	2	2	1
8496	1	2	1	2	1	1	1	2	2	1	1	2	1	2	1
8691	2	1	1	2	2	1	3	3	2	2	3	2	1	2	1
8702	1	2	1	2	1	2	3	1	1	1			2	1	2
8712	2	1	1	2	3	2	3	1	2	1	2	1	1	1	1
8827	1	2	1	2	1	1	3	1	1	2	3	1	1	2	1
8851	1	1	1	1	2	2	1	2	2	2	2	2	2	2	1
8905	2	1	1	1	2	2	3	2	2	2	2	2	2	1	2
8986	2	1	1	2	2	2	3	2	2	2	3	1	1	2	1
9106	1	1	1	2	1	2	3	2	1	1	3	1	1	2	2
9112	2	1	1	1	1	2	1	2	1	2	3	2	1	2	1
9235	1	1	1	2	3	2	1	1	2	1	1	2	1	2	2
9439	1	2	1	2	1	2	3	2	2	1	2	2	2	2	1
9455	2	1	1	1	1	2	1	2	2	2	1	2	2	1	1
9463	1	1	1	2	1	2	3	1	1	1	3	2	1	1	2
9592	2	1	1	1	2	2	1	2	2	2	2	2	2	1	2
9628	1	1	1	1	3	1	1	1	2	2	2	2	2	2	1
9633	1	2	1	2	1	1	3	3	2	2	2	2	1	2	1
9686	2	1	1	1	1	2	1	2	2	2	1	2	2	1	1
9705	1	1	1	2	3	2	1	2	2	2	1	2	1	2	1
9757	1	1	1	2	2	2	3	2	2	1	2	2	2	2	1
9899	2	1	1	2	1	2	3	3	2	2	2	2	2	2	1

FLEX LAB SURVEY RESULTS

1=A; 2=B; 3=C; BLANK = NO ANSWER

ID	Q-1	Q-2	Q-3	Q-4	Q-5	Q-6	Q-7	Q-8	Q-9	Q-10	Q-11	Q-12	Q-13	Q-14	Q-15
9932	2	1	1	2	2	2	3	2	2	2	1		2	2	1
9959	2	2	1	2	3	2	1	2	2	2	1	2	1	1	2
9979	1	1	1	1	3	2	1	2	1	2	1	2	2	2	2
9993	1	2	1	2	3	2	3	2	2	2	1	2		2	1

APPENDIX C

SURVEY RESULTS:

FREQUENCY DISTRIBUTIONS

AND GRAPHIC DISPLAY

FOR ALL STUDENTS IN SAMPLE

DESCRIPTION OF APPENDIX C

This Appendix includes fifteen charts and accompanying bar graphs produced by the University of Phoenix Data Analysis Service. Each chart and related graph is representative of one of the fifteen survey questions. The information in these charts is representative of all the students in the sample. It does not in any way differentiate between those who finished the class and those that did not.

The question topic is referred to in the title. The small chart at the top of the page reflects how many students out of the total 148 answered the question. There were seven questions left blank in the entire survey. The larger chart shows the frequency and percent for the different answers to each question. Finally, the bar chart graphically illustrates the frequency of each of the different answers.

FIRST CLASS

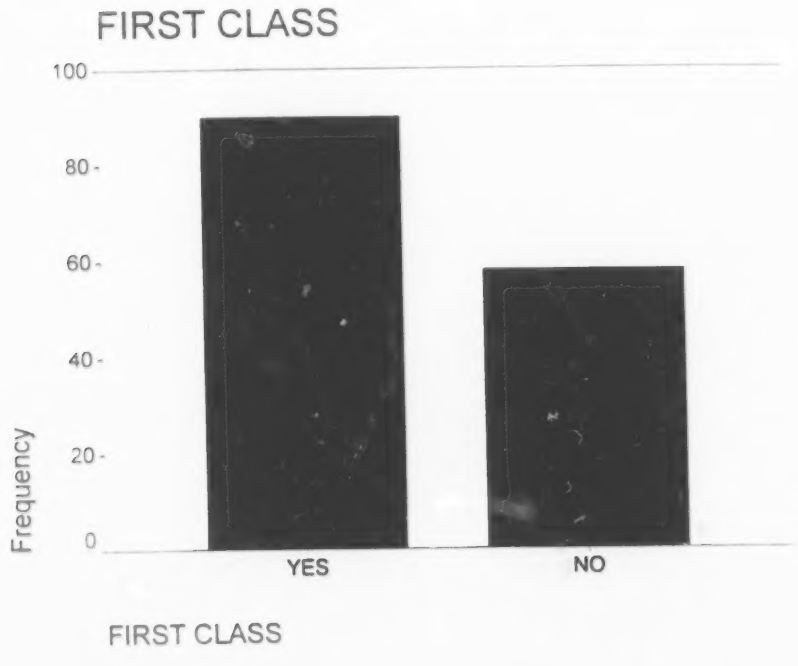
Statistics

FIRST CLASS

N	Valid	148
	Missing	0

FIRST CLASS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	90	60.8	60.8	60.8
	NO	58	39.2	39.2	100.0
	Total	148	100.0	100.0	



COMPUTER KNOW

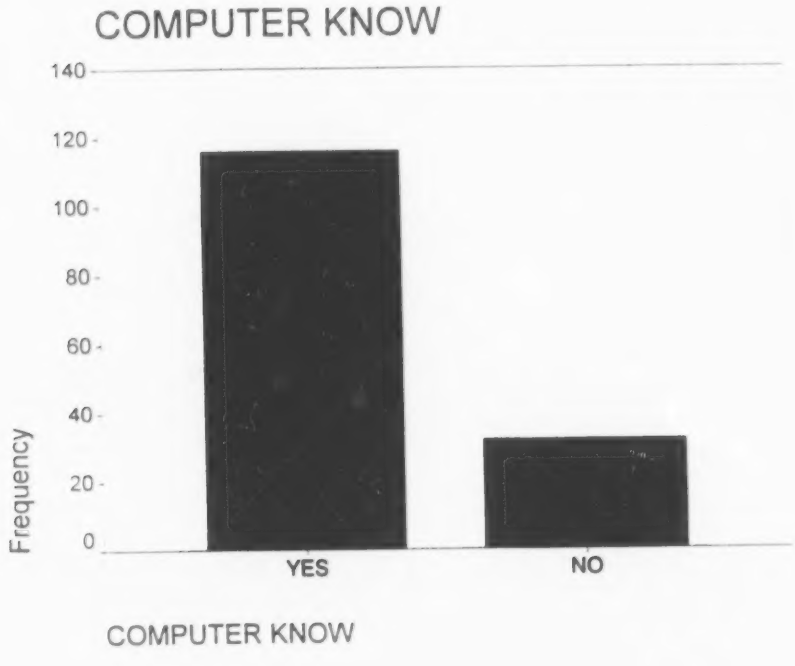
Statistics

COMPUTER KNOW

N	Valid	148
	Missing	0

COMPUTER KNOW

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	116	78.4	78.4	78.4
	NO	32	21.6	21.6	100.0
	Total	148	100.0	100.0	



WILL YOU COMPLETE

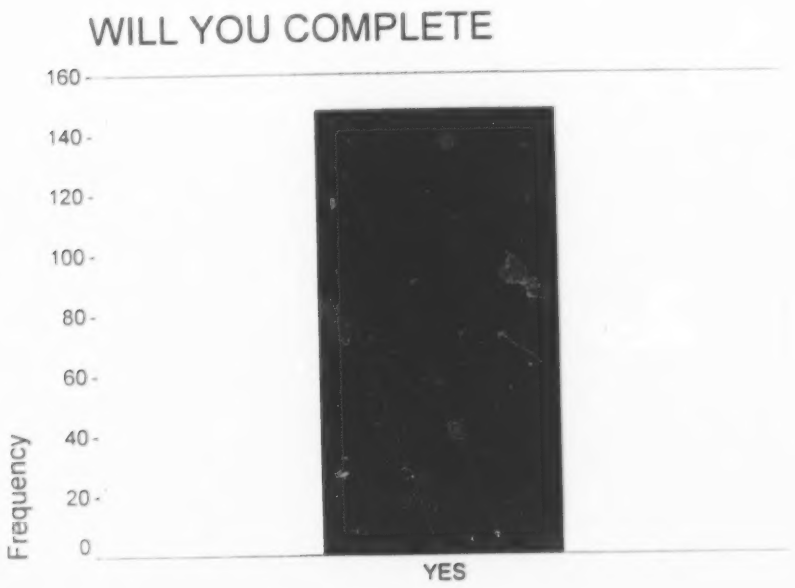
Statistics

WILL YOU COMPLETE

N	Valid	148
	Missing	0

WILL YOU COMPLETE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	148	100.0	100.0	100.0



SELF-EMPLOYED

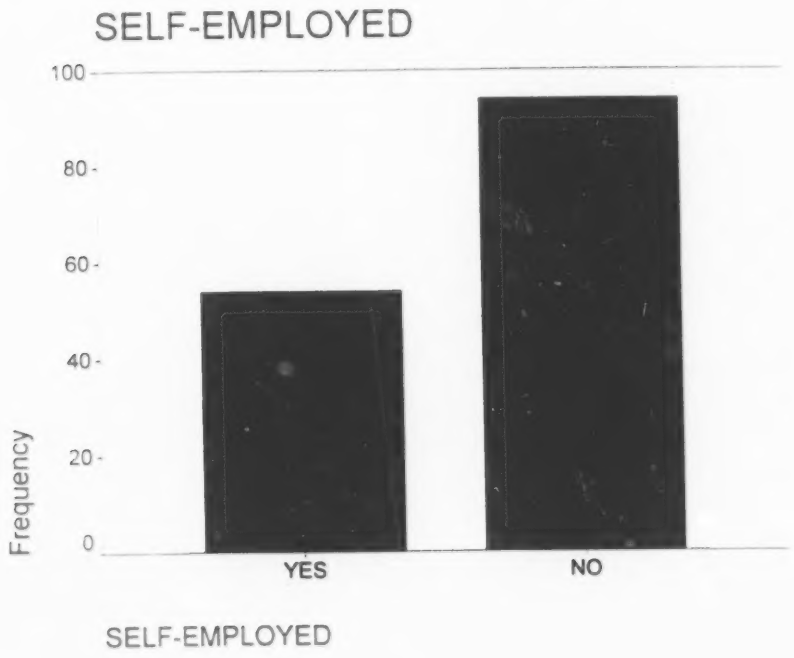
Statistics

SELF-EMPLOYED

N	Valid	148
	Missing	0

SELF-EMPLOYED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	54	36.5	36.5	36.5
	NO	94	63.5	63.5	100.0
	Total	148	100.0	100.0	



WORK STATUS

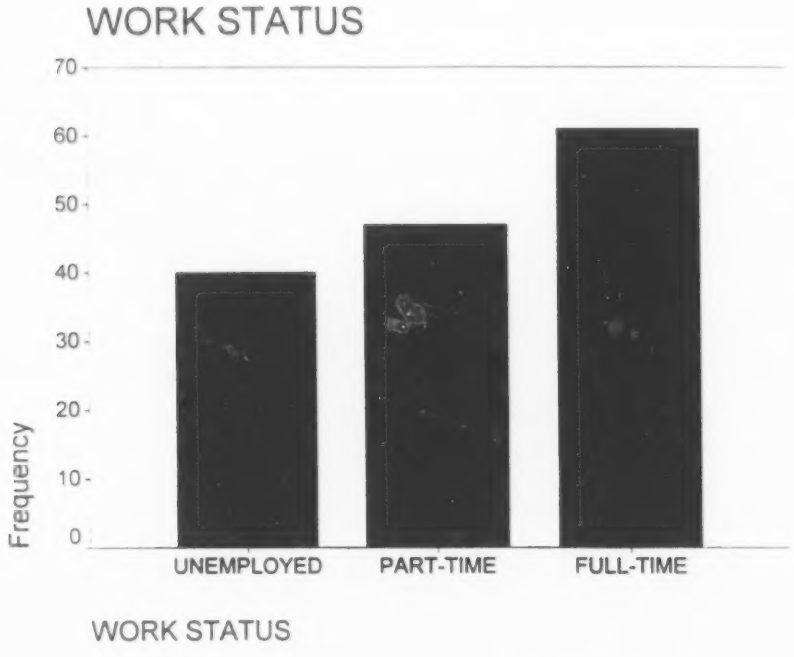
Statistics

WORK STATUS

N	Valid	148
	Missing	0

WORK STATUS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UNEMPLOYED	40	27.0	27.0	27.0
	PART-TIME	47	31.8	31.8	58.8
	FULL-TIME	61	41.2	41.2	100.0
	Total	148	100.0	100.0	



CHILDREN

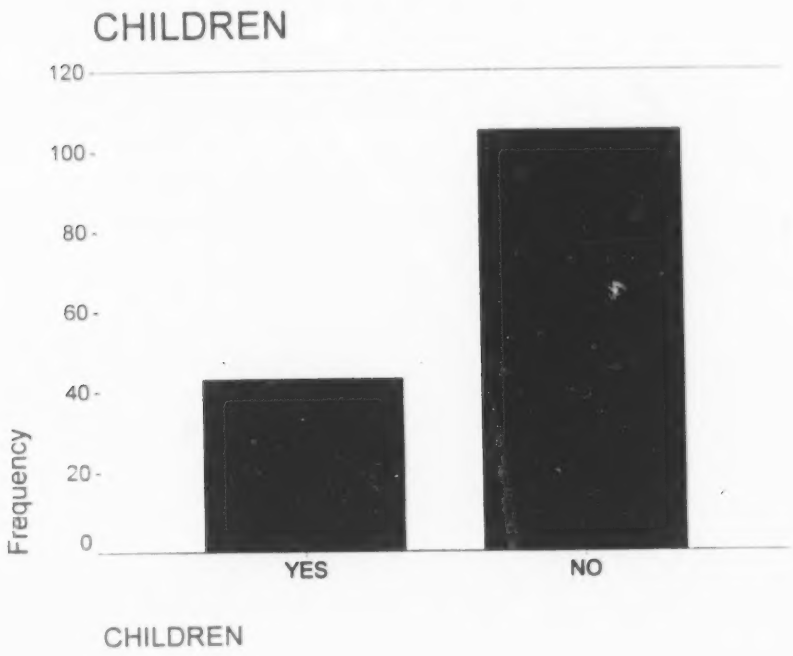
Statistics

CHILDREN

N	Valid	148
	Missing	0

CHILDREN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	43	29.1	29.1	29.1
	NO	105	70.9	70.9	100.0
	Total	148	100.0	100.0	



PAID FOR BY

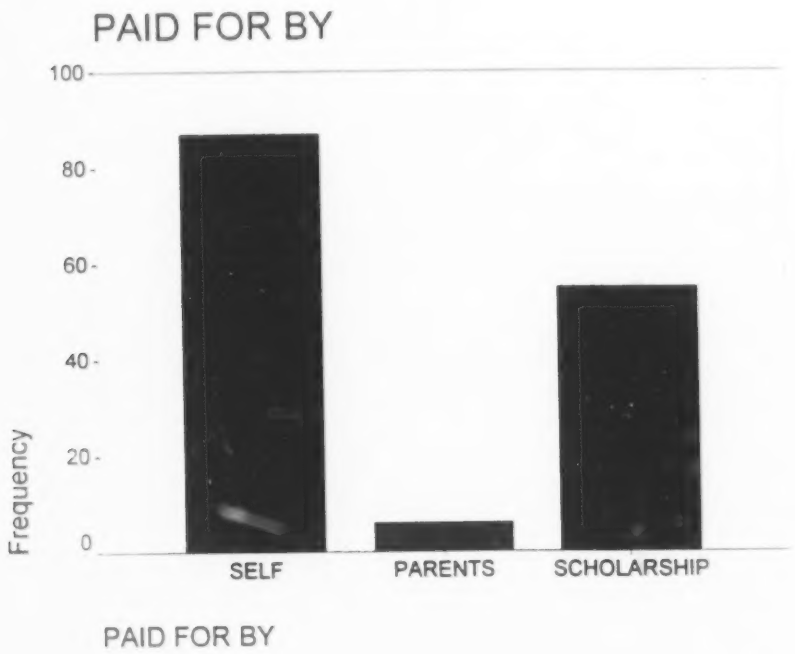
Statistics

PAID FOR BY

N	Valid	148
	Missing	0

PAID FOR BY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SELF	87	58.8	58.8	58.8
	PARENTS	6	4.1	4.1	62.8
	SCHOLARSHIP	55	37.2	37.2	100.0
	Total	148	100.0	100.0	



TYPING SPEED

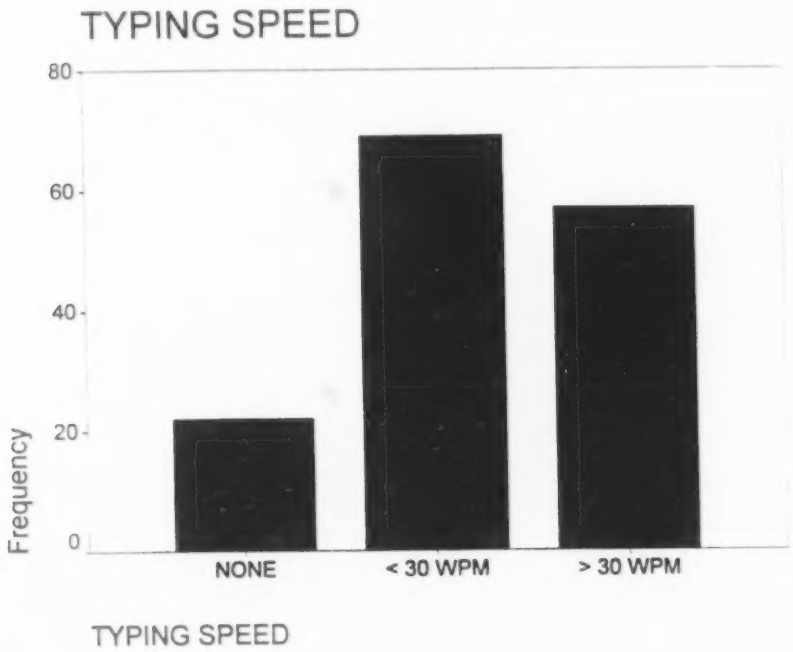
Statistics

TYPING SPEED

N	Valid	148
	Missing	0

TYPING SPEED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NONE	22	14.9	14.9	14.9
	< 30 WPM	69	46.6	46.6	61.5
	> 30 WPM	57	38.5	38.5	100.0
	Total	148	100.0	100.0	



REQUIRED

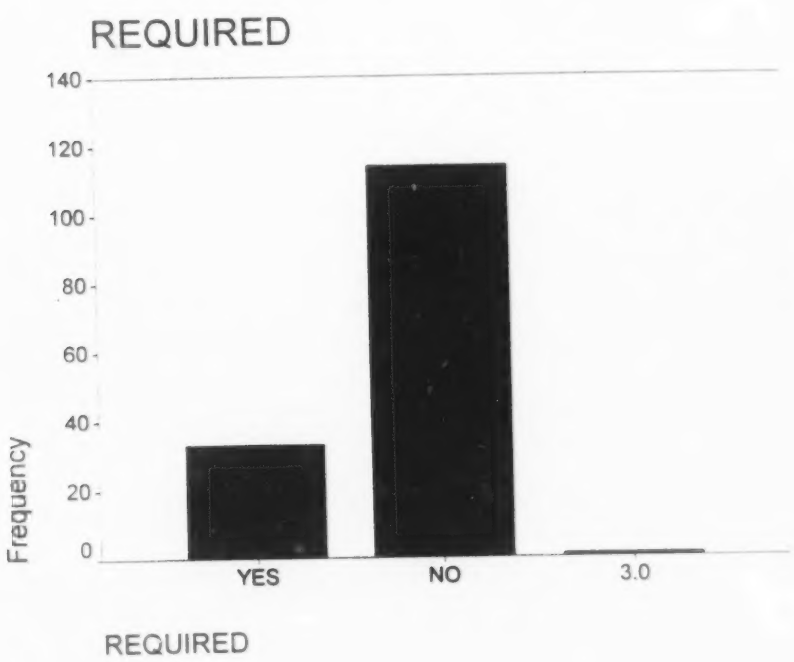
Statistics

REQUIRED

N	Valid	148
	Missing	0

REQUIRED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	33	22.3	22.3	22.3
	NO	114	77.0	77.0	99.3
	3.0	1	.7	.7	100.0
	Total	148	100.0	100.0	



PREFER TRAD. CLASS

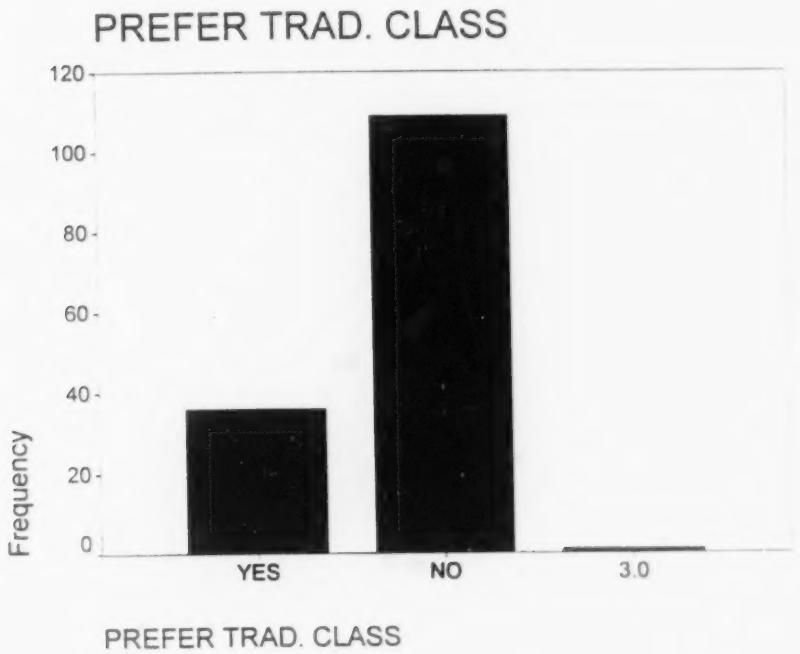
Statistics

PREFER TRAD. CLASS

N	Valid	146
	Missing	2

PREFER TRAD. CLASS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	36	24.3	24.7	24.7
	NO	109	73.6	74.7	99.3
	3.0	1	.7	.7	100.0
	Total	146	98.6	100.0	
Missing	System	2	1.4		
Total		148	100.0		



TOTAL CREDITS

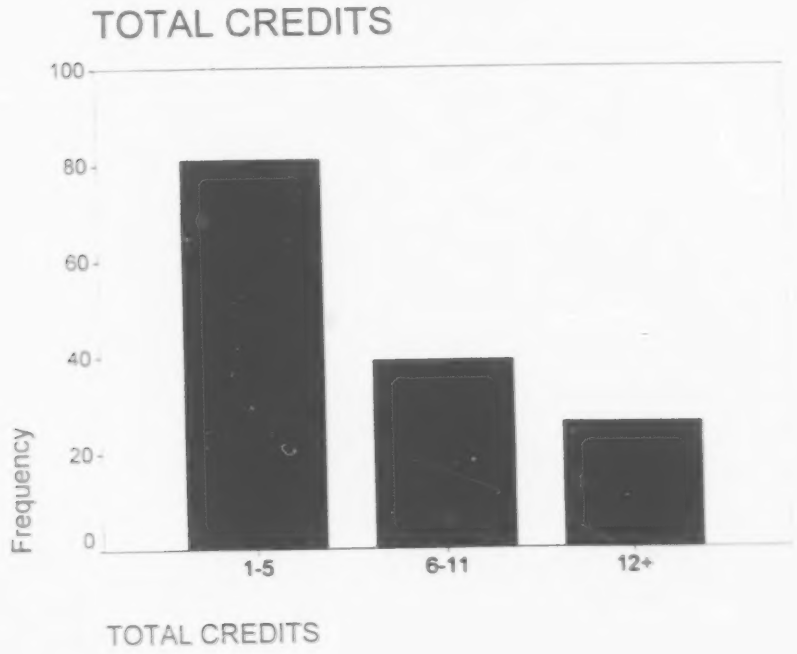
Statistics

TOTAL CREDITS

N	Valid	146
	Missing	2

TOTAL CREDITS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	81	54.7	55.5	55.5
	6-11	39	26.4	26.7	82.2
	12+	26	17.6	17.8	100.0
	Total	146	98.6	100.0	
Missing	System	2	1.4		
Total		148	100.0		



HS GRAD

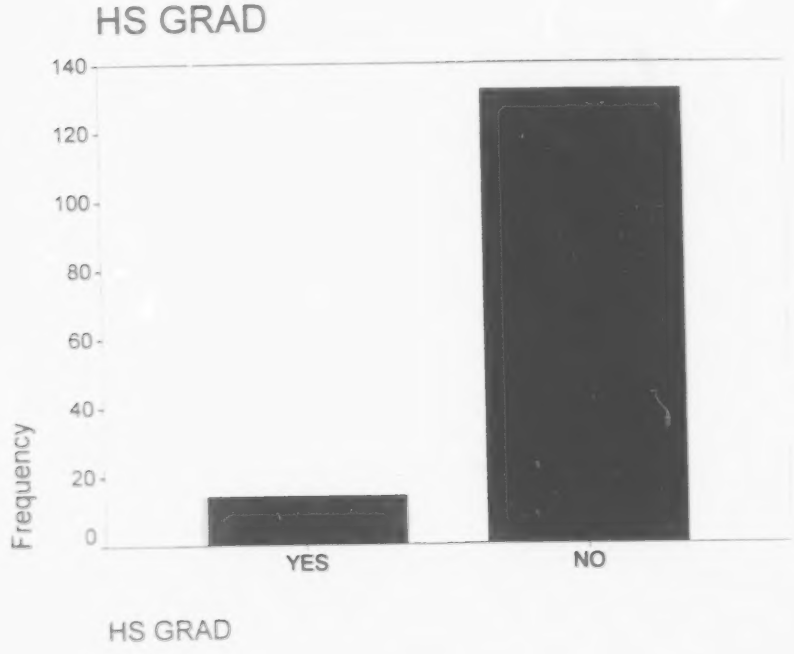
Statistics

HS GRAD

N	Valid	146
	Missing	2

HS GRAD

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	14	9.5	9.6	9.6
	NO	132	89.2	90.4	100.0
	Total	146	98.6	100.0	
Missing	System	2	1.4		
Total		148	100.0		



AGE

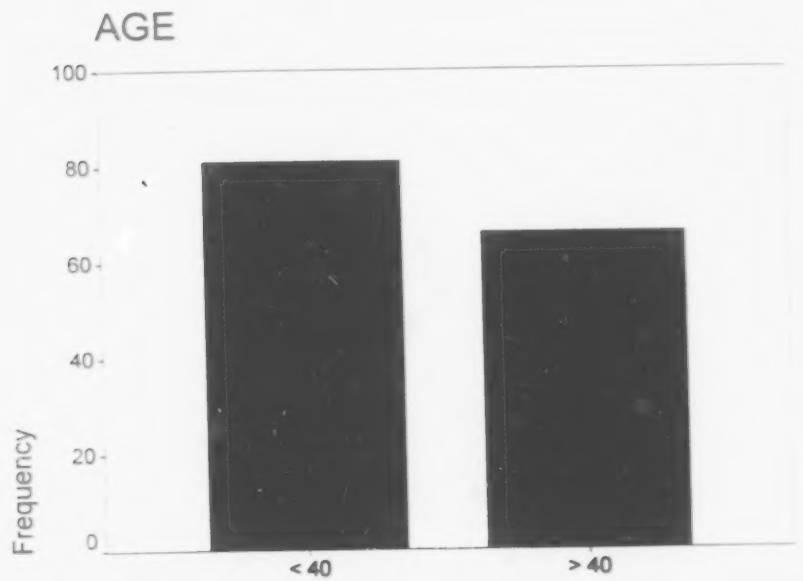
Statistics

AGE

N	Valid	147
	Missing	1

AGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 40	81	54.7	55.1	55.1
	> 40	66	44.6	44.9	100.0
	Total	147	99.3	100.0	
Missing	System	1	.7		
Total		148	100.0		



GENDER

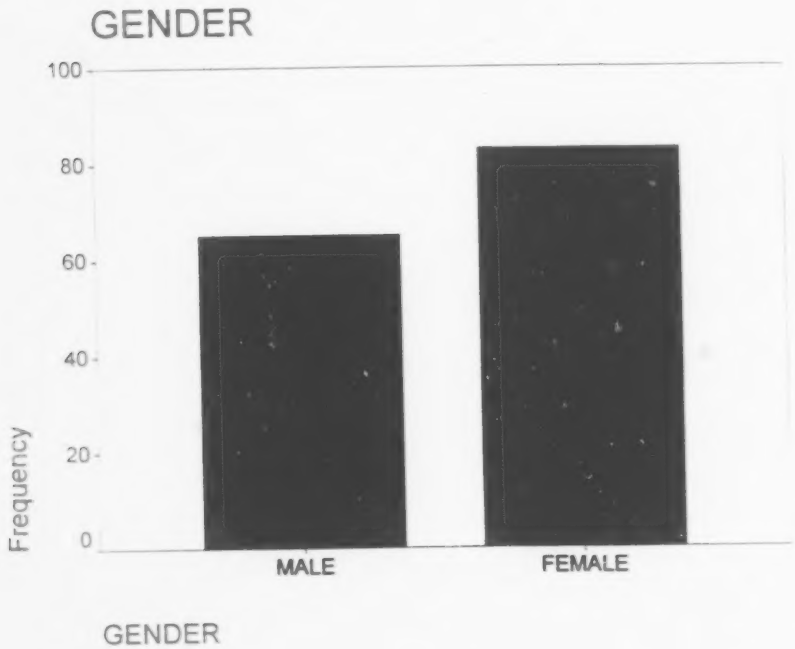
Statistics

GENDER

N	Valid	148
	Missing	0

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	65	43.9	43.9	43.9
	FEMALE	83	56.1	56.1	100.0
	Total	148	100.0	100.0	



COMPLETED CASE

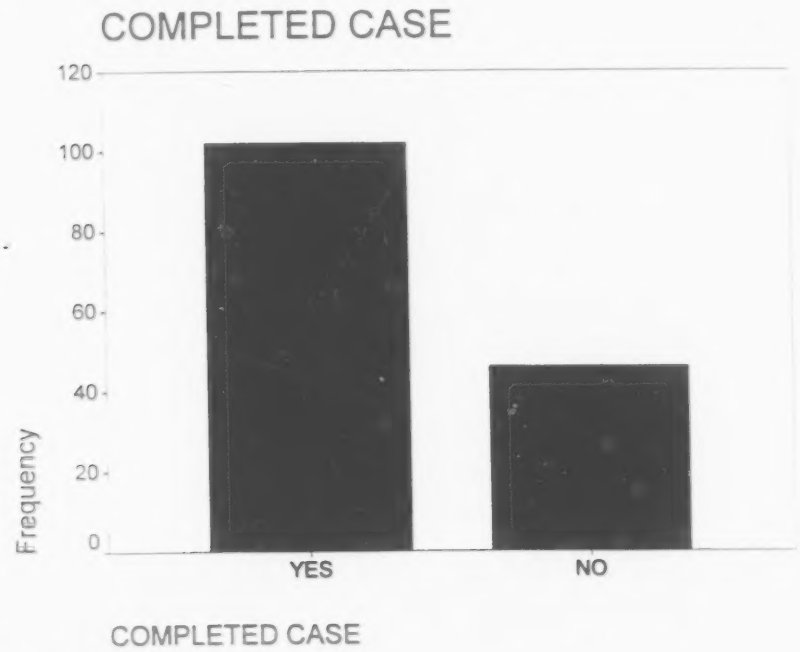
Statistics

COMPLETED CASE

N	Valid	148
	Missing	0

COMPLETED CASE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	102	68.9	68.9	68.9
	NO	46	31.1	31.1	100.0
	Total	148	100.0	100.0	



APPENDIX D

SURVEY RESULTS:

CROSS TABULATIONS

AND CHI-SQUARE TESTS

DESCRIPTION OF APPENDIX D

This Appendix includes fourteen charts produced by the University of Phoenix Data Analysis Service showing the correlation of each survey question (1 through 14), with whether or not the students completed the course (Question 15). The small chart at the top shows a cross tabulation with total numbers of those who finished and those who did not, broken down by the different answers to each question. The larger chart on the bottom reflects the Chi-Square analysis.

Note: The title to each of these charts includes the survey question topic and the words "Completed Case." It should read "Completed Class."

FIRST CLASS * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
FIRST CLASS	YES	61	29	90
	NO	41	17	58
Total		102	46	148

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.140[2]	1	.709		
Continuity Correction[1]	.037	1	.848		
Likelihood Ratio	.140	1	.708		
Fisher's Exact Test				.856	.426
Linear-by-Linear Association	.139	1	.710		
N of Valid Cases	148				

1. Computed only for a 2x2 table

2. 0 cells (.0%) have expected count less than 5. The minimum expected count is 18.03.

COMPUTER KNOW * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
COMPUTER KNOW	YES	82	34	116
	NO	20	12	32
Total		102	46	148

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.785[2]	1	.376		
Continuity Correction[1]	.450	1	.503		
Likelihood Ratio	.767	1	.381		
Fisher's Exact Test				.394	.249
Linear-by-Linear Association	.780	1	.377		
N of Valid Cases	148				

1. Computed only for a 2x2 table
2. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.95.

WILL YOU COMPLETE * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
WILL YOU COMPLETE	YES	102	46	148
Total		102	46	148

Chi-Square Tests

	Value
Pearson Chi-Square	.
N of Valid Cases	148

1. No statistics are computed because WILL YOU COMPLETE is a constant.

SELF-EMPLOYED * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		Total
		YES	NO	
SELF-EMPLOYED	YES	37	17	54
	NO	65	29	94
Total		102	46	148

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.006[2]	1	.936		
Continuity Correction[1]	.000	1	1.000		
Likelihood Ratio	.006	1	.936		
Fisher's Exact Test				1.000	.539
Linear-by-Linear Association	.006	1	.937		
N of Valid Cases	148				

1. Computed only for a 2x2 table

2. 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.78.

WORK STATUS * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
WORK STATUS	UNEMPLOYED	28	12	40
	PART-TIME	39	8	47
	FULL-TIME	35	26	61
Total		102	46	148

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.153[1]	2	.017
Likelihood Ratio	8.460	2	.015
Linear-by-Linear Association	2.642	1	.104
N of Valid Cases	148		

1. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.43.

CHILDREN * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
CHILDREN	YES	36	7	43
	NO	66	39	105
Total		102	46	148

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.199[2]	1	.013		
Continuity Correction[1]	5.264	1	.022		
Likelihood Ratio	6.699	1	.010		
Fisher's Exact Test				.018	.009
Linear-by-Linear Association	6.157	1	.013		
N of Valid Cases	148				

1. Computed only for a 2x2 table

2. 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.36.

PAID FOR BY * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
PAID FOR BY	SELF	55	32	87
	PARENTS	4	2	6
	SCHOLARSHIP	43	12	55
Total		102	46	148

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.537[1]	2	.171
Likelihood Ratio	3.647	2	.161
Linear-by-Linear Association	3.470	1	.062
N of Valid Cases	148		

1. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 1.86.

TYPING SPEED * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
TYPING SPEED	NONE	11	11	22
	< 30 WPM	51	18	69
	> 30 WPM	40	17	57
Total		102	46	148

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.521[1]	2	.104
Likelihood Ratio	4.272	2	.118
Linear-by-Linear Association	1.560	1	.212
N of Valid Cases	148		

1. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.84.

REQUIRED * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		Total
		YES	NO	
REQUIRED	YES	22	11	33
	NO	79	35	114
	3.0	1		1
Total		102	46	148

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.537[1]	2	.765
Likelihood Ratio	.829	2	.661
Linear-by-Linear Association	.190	1	.663
N of Valid Cases	148		

1. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .31.

PREFER TRAD. CLASS * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		Total
		YES	NO	
PREFER TRAD. CLASS	YES	23	13	36
	NO	76	33	109
	3.0	1		1
Total		100	46	146

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.890[1]	2	.641
Likelihood Ratio	1.179	2	.555
Linear-by-Linear Association	.626	1	.429
N of Valid Cases	146		

1. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .32.

TOTAL CREDITS * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
TOTAL CREDITS	1-5	53	28	81
	6-11	28	11	39
	12+	21	5	26
Total		102	44	146

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.293[1]	2	.318
Likelihood Ratio	2.406	2	.300
Linear-by-Linear Association	2.257	1	.133
N of Valid Cases	146		

1. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.84.

HS GRAD * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
HS GRAD	YES	10	4	14
	NO	91	41	132
Total		101	45	146

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.037[2]	1	.848		
Continuity Correction[1]	.000	1	1.000		
Likelihood Ratio	.037	1	.847		
Fisher's Exact Test				1.000	.557
Linear-by-Linear Association	.037	1	.848		
N of Valid Cases	146				

1. Computed only for a 2x2 table

2. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.32.

AGE * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		Total
		YES	NO	
AGE	< 40	53	28	81
	> 40	48	18	66
Total		101	46	147

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.900[2]	1	.343		
Continuity Correction[1]	.593	1	.441		
Likelihood Ratio	.906	1	.341		
Fisher's Exact Test				.375	.221
Linear-by-Linear Association	.894	1	.344		
N of Valid Cases	147				

1. Computed only for a 2x2 table

2. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.65.

GENDER * COMPLETED CASE

Crosstab

Count

		COMPLETED CASE		
		YES	NO	Total
GENDER	MALE	40	25	65
	FEMALE	62	21	83
Total		102	46	148

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.947	1	.086		
Continuity Correction[1]	2.365	1	.124		
Likelihood Ratio	2.936	1	.087		
Fisher's Exact Test				.108	.062
Linear-by-Linear Association	2.927	1	.087		
N of Valid Cases	148				

1. Computed only for a 2x2 table

2. 0 cells (.0%) have expected count less than 5. The minimum expected count is 20.20.

References

A nation at risk: 1983 report of the National Commission on Excellence in Education. (1991). The American Reader.

Bonham, L. A. & Luckie J. A. I. (1993). Taking a break in schooling: Why community college students stop out. Community College Journal of Research and Practice, 17, 257-270.

Brawer. F. B. (1996, April). Retention - attrition in the nineties. Los Angeles, CA: ERIC Clearinghouse for Community Colleges. (ERIC Document Reproduction Service No. ED 393 510)

Chahin, J. (1993). Hispanics in higher education: Trends in participation. Charleston, WV: ERIC Clearinghouse on Rural Education and Small Schools. (ERIC Document Reproduction Service No. 357 911)

Cohen, A. M. & Brawer, F. B. (1996). The American community college (3rd ed.). San Francisco: Jossey-Bass.

Coll, K. M., & VonSeggern, D. J. (1991, May). Community college student retention: Some procedural and programmatic suggestions. Paper presented at the Wyoming Higher Education Student Affairs Conference. (ERIC Document Reproduction Service No. 345 816)

Cornell, T. (1996, July 14). Third of college freshmen drop out. Boston Herald, p. 1.

Feldman, M. J. (1993). Factors associated with one-year retention in a community college. Research in Higher Education, 34 , 503-512.

Gaustad, J. (1991). Identifying Potential Dropouts. Eugene, Oregon: ERIC Clearinghouse on Educational Management. (ERIC Document Reproduction Service No. 339 092)

Glass, Jr., J. C. & Garrett, M. S. (1995). Student participation in a college orientation course, retention, and grade point average. Community College Journal of Research and Practice, 19, 117-132.

Gordon, S. (1997, November 2). American Indians gathering to talk education and politics/largest convention in Tacoma history begins Monday. The News Tribune, p. C-1.

Hobby, B. (1997, February 17). Special programs are reducing college dropouts. Houston Chronicle, p. A-29.

Israelsen, B. (1996, July 28). Dropout rates are high but officials not alarmed about numbers: Dropout rate high at Utah colleges. The Salt Lake Tribune, p. B-1.

Kenny, D. A. (1987). Statistics for the social and behavioral sciences. Boston: Little, Brown and Company.

Kern, G. M., & Matta, K. F. (1987). Learning style as an influence on the effectiveness of self-paced computer-assisted instruction: Preliminary results. Computers & Industrial Engineering, 13, 203-207. (Abstract)

Mohammadi, J. (1994). Exploring retention and attrition in a two-year public community college. (ERIC Document Reproduction Service No. ED 382 257)

Moore, N. (1995, March). Persistence and attrition at San Juan College. (ERIC Document Reproduction Service No. ED 380 159)

Price, L. A. (1993, June). Characteristics of early student dropouts at Allegany Community College and recommendations for early intervention. (ERIC Document Reproduction Service No. ED 361 051)

Promising practices for the 21st century. (1996). Willard Adult Learning Center 1996 List of Nominees.

Richards, B. (1994). Fred Keller and the Flex Lab. Los Angeles, CA: ERIC Clearinghouse for Community Colleges. (ERIC Document Reproduction Service No. ED 367 395)

Roghaar, L. A., & Vangelisti, A. I. (Spring, 1996). Expressed attributions for academic success and failure by adolescents and young adults. Western Journal of Communications, 60, 124-130.

Santa Fe Community College Comprehensive Development Plan. (1994). Santa Fe, New Mexico: Santa Fe Community College.

Schwartz, W. (1995). School Dropouts: New information about an old problem. New York, NY: ERIC Clearinghouse on Urban Education. (ERIC Document Reproduction Service No. ED 386 515)

Smolkin, R. (1998, February 3). One-third of Hispanics drop out: Federal study reveals rate far exceeding that of white, black students. Milwaukee Journal Sentinel, p. 3.

Strickland, R. (1997, October 23). Celebrating 10 years of helping adults adapt to college life. Hartford Courant, p. 7.

Survey finds more freshmen quitting. (1996, July 11). Courier-Journal, p. A-2.

Windham, P. (1994, August 1-3). The relative importance of selected factors to attrition at public community colleges. Paper presented at the Southeastern Association for Community Colleges Twenty-Third Annual Conference, Savannah, Georgia.